

Mr. Michael Romero  
Oregon Department of Environmental Quality  
700 NE Multnomah St.  
Portland, OR 97232

**ENVIRONMENT**

Subject:  
Semi-Annual Groundwater Monitoring Report  
Second Quarter 2015 and Third Quarter 2015  
Willbridge Bulk Fuel Facilities, Portland, Oregon  
Consent Order WMCSR-NWR-94-06  
ECSI No. 1549

Date:  
December 22, 2015

Dear Mr. Romero:

On behalf of the Willbridge Terminal Group (WTG), ARCADIS U.S., Inc. (Arcadis) has prepared this Semi-Annual Groundwater Monitoring Report (report) for the Willbridge bulk fuel facilities located in Portland, Oregon (site). A site location map is presented on Figure 1. This report summarizes site monitoring activities conducted in the second quarter of 2015 and third quarter of 2015 to fulfill the requirements of Section 7F of the Oregon Department of Environmental Quality (DEQ) Consent Order WMCSR-NWR-94-06. The WTG consists of Chevron Products Company (Chevron), Phillips 66 Company (Phillips), and Kinder Morgan, Inc. (Kinder Morgan).

Site monitoring activities discussed in this report were conducted by Arcadis on behalf of Chevron and Phillips and by Antea Group on behalf of Kinder Morgan. A site plan depicting the location of each bulk fuel facility, as well as monitoring wells in the WTG well network, is shown on Figure 2.

At each of the terminals that comprise the WTG, depth-to-water measurements are collected on a quarterly basis, and groundwater sampling is conducted on a semi-annual basis during the first and third quarters in accordance with the Sampling and Analysis Plan Addendum, dated September 22, 2006 (Delta 2006). Additionally, separate phase hydrocarbon (SPH) recovery is conducted on at least a quarterly basis at the Chevron, Phillips, and Kinder Morgan Terminals.

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## **Groundwater Monitoring**

During this reporting period, depth-to-water and SPH measurements were collected at accessible WTG network monitoring wells by Arcadis and Antea Group on June 9, 2015 (Second Quarter) and August 19, 2015 (Third Quarter). Groundwater samples were collected from September 8, 2015 to September 21, 2015.

Groundwater samples from the Chevron and Phillips Terminals were collected using a no purge sampling method. Groundwater samples from the Kinder Morgan Terminal were collected using a low flow sampling technique.

## **Water Level Measurements**

Depth-to-water was measured using a static oil/water level indicator from the top of the monitoring well casing and recorded on field data sheets. The measurements were subtracted from surveyed top of casing elevations to calculate the groundwater elevation at each monitoring well relative to the City of Portland datum. Depth-to-water measurements and calculated groundwater elevations for Chevron, Kinder Morgan, and Phillips monitoring wells are presented in Tables 1A, 1B, and 1C, respectively. Groundwater elevation data collected from monitoring wells with shallow screened intervals of approximately 5 to 30 feet below ground surface (bgs) were used to create groundwater elevation contour maps. Second quarter 2015 and third quarter 2015 groundwater elevation contours for the WTG well network are shown on Figures 3 and 4, respectively.

During the June 9, 2015 gauging event, groundwater elevations ranged from 8.19 feet<sup>1</sup> (U-22A) to 32.19 feet (MW-13). During the August 19, 2015 gauging event, groundwater elevations ranged from 7.72 feet (U-22A) to 31.73 feet (CR-11). Based on both second quarter 2015 and third quarter 2015 data, the inferred groundwater flow direction is toward the Willamette River (northeast) at an average gradient of 0.0085 vertical feet per lateral foot, which is consistent with historical data. Field gauging sheets are included in Attachment A.

In addition to the gauging data gathered from the WTG monitoring well network, river stage data for the Willamette River and local precipitation data have been

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<sup>1</sup> All elevation data are measured in feet above the datum plane of the City of Portland.

historically compiled and presented within this report (as Figure 5). River stage data were historically collected at the Morrison Bridge river gauge and standardized to the City of Portland (CoP) datum (U.S. Geological Survey 2015a). These precipitation data are no longer available at the U.S. Geological Survey (USGS) site from the Yeon Rain Gauge, part of the Portland Hydra Network (U.S. Geological Survey 2015b). Due to this change in data available, rain gauge data (formerly presented as Figure 5) are not presented in this report. An evaluation of groundwater elevation data and groundwater analytical data indicate that these data are consistent with historical data. Immediate fluctuation of groundwater data is not observed due to precipitation events, but rather due to seasonal weather patterns. Rain gauge data will not be presented in future reports unless requested by DEQ.

#### **Groundwater Sample Collection and Analysis**

In total, 20 monitoring wells were sampled from the WTG monitoring well network during this reporting period in accordance with the Sampling and Analysis Plan (Delta 2006). Additional monitoring wells were sampled for purposes other than those outlined in the Sampling and Analysis Plan (Delta 2006), but those data are not summarized in this report. The specific WTG network monitoring wells sampled during this reporting period include the following:

- Chevron: B-9A, B-10, B-28, B-29, B-30, and CR-1
- Phillips: B-35, B-36, B-40, P1-A and U-2,
- Kinder Morgan: MW-8, MW-25, MW-26, MW-33, MW-34, MW-36, MW-37, and MW-40

Based on the Hydrasleeve™ Implementation Memo (ARCADIS 2012) and subsequent DEQ approval (pers. com., September 21, 2012), the Chevron and Phillips monitoring wells were sampled using a no purge sampling method. Following gauging at each monitoring well, a HydraSleeve was deployed to a set depth based on individual monitoring well construction. The HydraSleeve remained deployed in the monitoring wells for at least 24 hours to allow conditions to equilibrate. After the 24-hour equilibration period, the HydraSleeves were retrieved with a continuous pull method of approximately one foot per second. Groundwater samples and water quality parameters were subsequently collected following Arcadis standard operating procedures for Groundwater Sampling with HydraSleeves (Attachment B). Water quality parameters including, turbidity, dissolved oxygen, oxidation reduction

potential, pH, and temperature were measured with a Horiba U-52 water quality meter and recorded on field sampling forms included in Attachment C.

At monitoring wells B-21 (Chevron), and B-37 (Phillips) the Hydrasleeve could not be deployed because of an obstruction in the well casing, so no samples were collected. Samples were not collected at B-20 (Chevron) and U-4 (Phillips) because measurable NAPL thickness was observed during gauging. Monitoring well U-5 (Phillips) and U-29A (Phillips) were not sampled because the monitoring well did not contain sufficient water.

Antea used a low flow sampling methodology at Kinder Morgan monitoring wells sampled during this reporting period. Water quality parameters including specific conductivity, dissolved oxygen, oxidation reduction potential, pH, and temperature were measured during purging with an YSI 556 multi-parameter water quality meter and recorded on field sampling forms. Purging was conducted at a rate less than 500 milliliters per minute. After the groundwater parameters stabilized, samples were collected. Field sampling forms are included in Attachment C.

Subsequent to collection, samples were packed on ice and shipped under standard chain-of-custody procedures for analysis at certified testing facilities. Chevron and Phillips samples were sent to Test America in Tacoma, WA. Kinder Morgan samples were sent to Alpha Analytical in Sparks, Nevada. Groundwater samples were screened for the following analytes:

- Total petroleum hydrocarbons (TPH) in the gasoline range (TPH-G) by Northwest Method NWTPH-Gx.
- TPH in the diesel range (TPH-D) and TPH in the heavy oil range (TPH-O) by Northwest Method NWTPH-Dx.
- Benzene, toluene, ethylbenzene, total xylenes (BTEX), and Methyl tert-butyl ether (MTBE) by US Environmental Protection Agency (EPA) Method 8260B.
- Polynuclear aromatic hydrocarbons (PAH) by USEPA Method 8270C-SIM.
- Total Resource Conservation Recovery Act (RCRA) 8 metals, copper, manganese, and zinc by EPA Method 6020.

- Low level mercury by EPA 1631E was analyzed at Chevron and Phillips monitoring wells and Kinder Morgan monitoring wells MW-33, MW-34, MW-36, MW-37, MW-40.

As discussed below, quality assurance/quality control (QA/QC) samples including blind duplicates, trip blanks, and equipment blanks were submitted for laboratory analysis.

### **Groundwater Analytical Results**

Historical and current analytical results are summarized in Tables 2 through 4. Based on comparison of the recent and historical laboratory results for petroleum hydrocarbons, VOCs, PAHs, and metals in groundwater, concentrations of constituents are generally stable. The concentrations of TPH-D at monitoring wells MW-8, MW-25, MW-26, MW-33, MW-34, MW-36, MW-37, MW-40 (Kinder Morgan), and B-36, B-40 (Phillips) and of TPH-O at monitoring wells B-10, MW-25, MW-26, MW-34, MW-37, MW-40 (Kinder Morgan) were elevated as compared to previous sampling events but were generally within the historical range of concentrations for these wells. The detections of TPH-D in wells MW-8, MW-25, and MW-36; and of TPH-O in wells MW-25, MW-26, and MW-40 were the first detections of these constituents observed above the applicable laboratory reporting limit. The TPH-D detection in MW-8 is the first detection above the laboratory reporting limit since this well began to be analyzed for TPH-D in 2011. However, this result is an estimated value, as the result was less than the laboratory reporting limit, but greater than the method detection limit for this analyte. Groundwater samples were analyzed for TPH-D and TPH-O without using a silica gel cleanup method. Elevated concentrations of TPH-D and TPH-O may be due to the polar biodegradation products and/or natural organic matter present in the sample extract. Arcadis will continue to monitor dissolved-phase concentrations in these wells during subsequent sampling events.

Analytical results from monitoring well locations in close proximity to the dock areas of the WTG facilities are screened against the Portland Harbor Joint Source Control Strategy (JSCS) applicable screening level values (SLVs) in Tables 5 through 8. Of the select monitoring wells compared against the JSCS SLVs and at which samples were collected (for Chevron: B-10 and CR-1, for Kinder Morgan: MW-33, MW-34, MW-36, MW-37 and MW-40 and for Phillips: B-40 and P-1A), there were no detections above applicable SLVs for benzene, ethylbenzene, or toluene during this sampling event. The groundwater samples collected from Chevron monitoring well B-10 and Phillips monitoring well B-40 contained PAH detections above applicable

SLVs. Groundwater samples collected on the Kinder Morgan terminal did not contain detectable concentrations of PAH above SLVs; however, the laboratory reporting limits for PAH analysis exceeded the SLVs (method reporting limit ranged between 0.020 to 0.20 µg/L for analytes with an SLV of 0.018 µg/L) in some cases. Total metals concentrations exceeded the SLVs in groundwater samples collected at each WTG terminal. Third quarter 2015 laboratory analytical results are included in Attachment D.

Data from monitoring wells not part of the WTG monitoring well network are also compared to SLVs in Tables 7 through 8 (for Chevron: B-19, B-26, B-33, CR-3, CR-26, CR-27C, CR-28A, CR-28B, CR-28C, CR-29A, CR-29B, CR-30A, CR-30B, CR-31A, CR-32A, CR-32B, CR-32C, for Kinder Morgan: MW-41B, MW41C, MW42B, MW-42C, and for Phillips: U-29B and U-29C), but are not discussed in this report.

#### **Quality Assurance**

Blind duplicate samples were collected at an approximate ratio of 4:1 of sampled locations versus duplicate samples. In general, duplicate sample analytical results were consistent with those of the parent samples. VOC, TPH-G, and TPH-O results in duplicate sample B-10 were similar to those detected in the parent sample; however, TPH-D was detected at 13,000 µg/L in the parent sample and 4,600 µg/L in the duplicate sample, likely due to relatively high turbidity in the parent sample. Duplicate locations are noted in Tables 2 through 8.

Equipment blank samples were collected at a minimum ratio of 6:1 of sampled locations versus equipment blanks for Chevron and Phillips. Equipment blank samples were not collected or analyzed with Kinder Morgan's sample set. Equipment blank samples were submitted to the laboratory for analysis of the same compounds to confirm field decontamination procedures were adequate to prevent cross-contamination. Analytes were not detected in the equipment blank samples.

Trip blank samples were submitted for analysis along with coolers containing samples for VOC analysis. No detected analytes were found in the trip blank samples. Analytical results for trip blank samples are included in the laboratory reports in Appendix D. Quality assurance measures indicate that groundwater data quality presented in this report are acceptable.

### **Separate Phase Hydrocarbon Recovery**

The Willbridge Terminals began manual recovery of SPH in February 1997. SPH recovery is conducted periodically based on field SPH observations collected during depth-to-water measurement. In general, SPH recovery is conducted if measureable SPH (more than approximately 0.01 ft) is detected in a monitoring well during the current quarterly gauging event. SPH recovery from monitoring wells is performed using a variety of manual methods, including bailing, pumping using a peristaltic pump, and/or sorption using a sorbent sock. SPH thicknesses are summarized in Tables 1A through 1C. For this reporting period, the maximum observed SPH thickness during quarterly gauging was 0.39 ft at the Chevron terminal (CR-23A), 0.21 ft at the Phillips terminal (well U-5A), and 0.08 ft at the Kinder Morgan terminal (MW-19). Recovered quantities of SPH are shown in Table 9. The total recovered quantity of SPH is estimated at one half gallon SPH-water mixture removed per quarter for the WTG terminals.

ARCADIS observed SPH in monitoring well CR-4A (Chevron) for the first time during the August 26, 2014 gauging event and again during the August 19, 2015 gauging event. Chevron and Phillips Terminal management confirmed that no recent releases have occurred. ARCADIS conducted SPH recovery at CR-4A in December 2014 and 0.03 gallons of SPH-water mixture was removed. Measurable SPH was not observed at CR-4A during the June 9, 2015 gauging event. Product samples were not collected from CR-4A during First Quarter 2015 because the well contained insufficient volume to sample. Product samples were collected during the 3Q product removal event. ARCADIS will continue to monitor for SPH at CR-4A during routine quarterly gauging events.

Since 1997, approximately 225 gallons of SPH have been removed from site groundwater via manual recovery, including approximately one gallon of SPH-water mixture during this reporting period (second quarter 2015 and third quarter 2015). Additionally, SPH is recovered by the groundwater extraction and treatment (GWET) system located on the Phillips and Chevron terminals. Since December 2001, approximately 4,685 gallons of SPH have been removed via the GWET system. The system batch tank was last emptied in July 2012 and a non-measureable amount of SPH has been recovered by the GWET system since then.

December 22, 2015  
Mr. Mike Romero

### Investigation Derived Waste

Purge water and equipment decontamination water generated during sampling at the Kinder Morgan terminal is transported off site for treatment and disposal. Purge water and equipment decontamination water generated at the Chevron and Phillips terminals are disposed of in onsite oil/water separators and the GWET system. The GWET system operates under City of Portland Industrial Wastewater Discharge Permit No. 500.015. Used disposable equipment is collected in trash bags and disposed of as municipal waste.

### Future Activities

The following tasks will be performed during fourth quarter 2015 and first quarter 2016:

- Measure depth-to-water and SPH in accessible WTG wells in December 2015 and March 2016.
- Perform periodic SPH recovery from wells where measurable SPH is observed.
- Continue operation of the groundwater extraction system located on the Phillips and Chevron facilities.
- Collect groundwater samples from selected WTG monitoring wells in March 2016.

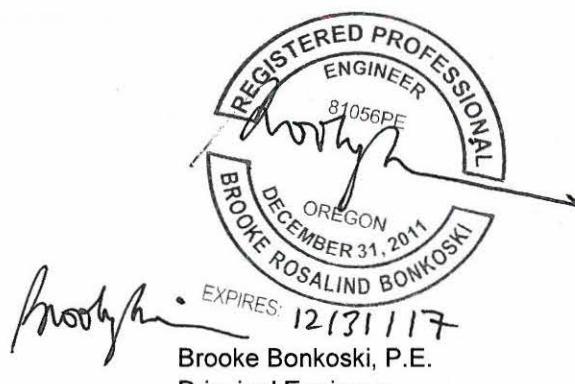
If you have any comments or questions, please contact Christopher Dotson by telephone at 503.220.8201 ext. 1121 or by e-mail at christopher.dotson@arcadis.com.

Sincerely,

Arcadis U.S., Inc.



Christopher Dotson  
Project Manager



Copies:

Ken Theissen, DEQ  
Eva DeMaria, EPA  
Tim Bishop, Chevron Environmental Management Company  
Richard Soloman, Phillips 66 Company  
Rob Truedinger, Kinder Morgan Inc.  
Keith Sheets, CH2M  
Thomas J. Bialobok, AECOM

## Figures

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- Figure 2: Site Plan
- Figure 3: Groundwater Elevation Contour and SPH Thickness Map – June 9, 2015
- Figure 4: Groundwater Elevation Contour and SPH Thickness Map – August 19, 2015

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- Table 1A: Groundwater Elevation and SPH Recovery Data Chevron Products Company
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- Table 2: Groundwater Analytical Results – TPH, BTEX and MTBE Compounds
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- Table 5: Groundwater Screening Level Comparisons– Dock Area Shallow Wells– TPH, VOCs, and Metals
- Table 6: Groundwater Screening Level Comparisons– Dock Area Shallow Wells– PAHs
- Table 7: Groundwater Screening Level Comparisons– Dock Area Cluster Wells– TPH, VOCs, and Metals

- Table 8: Groundwater Screening Level Comparisons– Dock Area Cluster Wells–PAHs
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### Attachments

- Attachment A: Field Gauging Sheets
- Attachment B: Standard Operating Procedures
- Attachment C: Field Sampling Forms
- Attachment D: Laboratory Analytical Results

### References

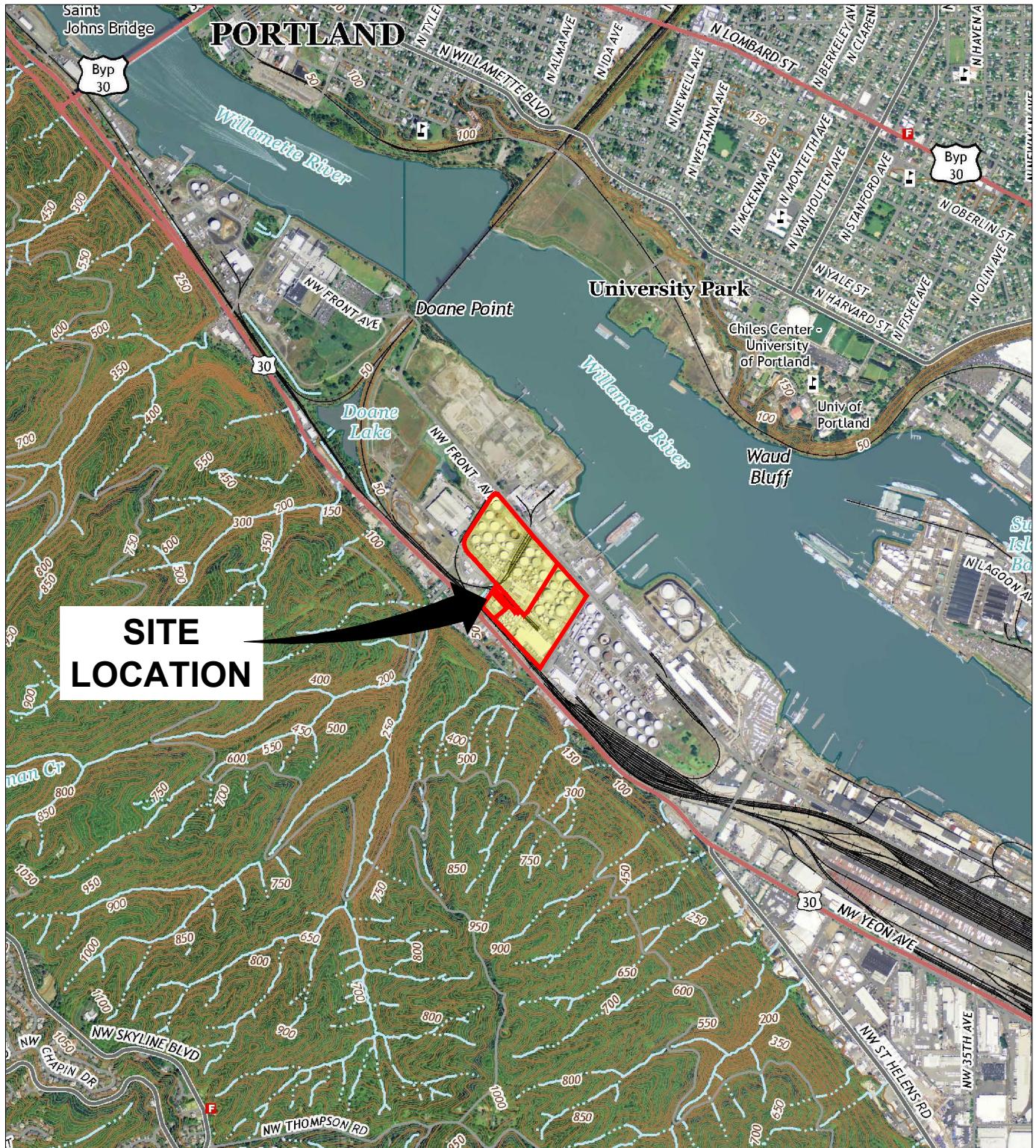
ARCADIS U.S., Inc. 2012. HydraSleeve™ Groundwater Sampling Plan for the September 2012 Groundwater Monitoring Event at the Chevron and Phillips Willbridge Bulk Fuel Terminals, Portland, Oregon, ESCI #25 and 160, August 31.

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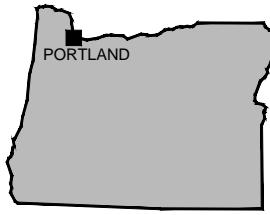
**Figures**



REFERENCE: BASE MAP USGS 7.5. MIN. TOPO. QUAD., PORTLAND AND LINNTON, OREGON. 2014.

Approximate Scale: 1 in. = 2000 ft.

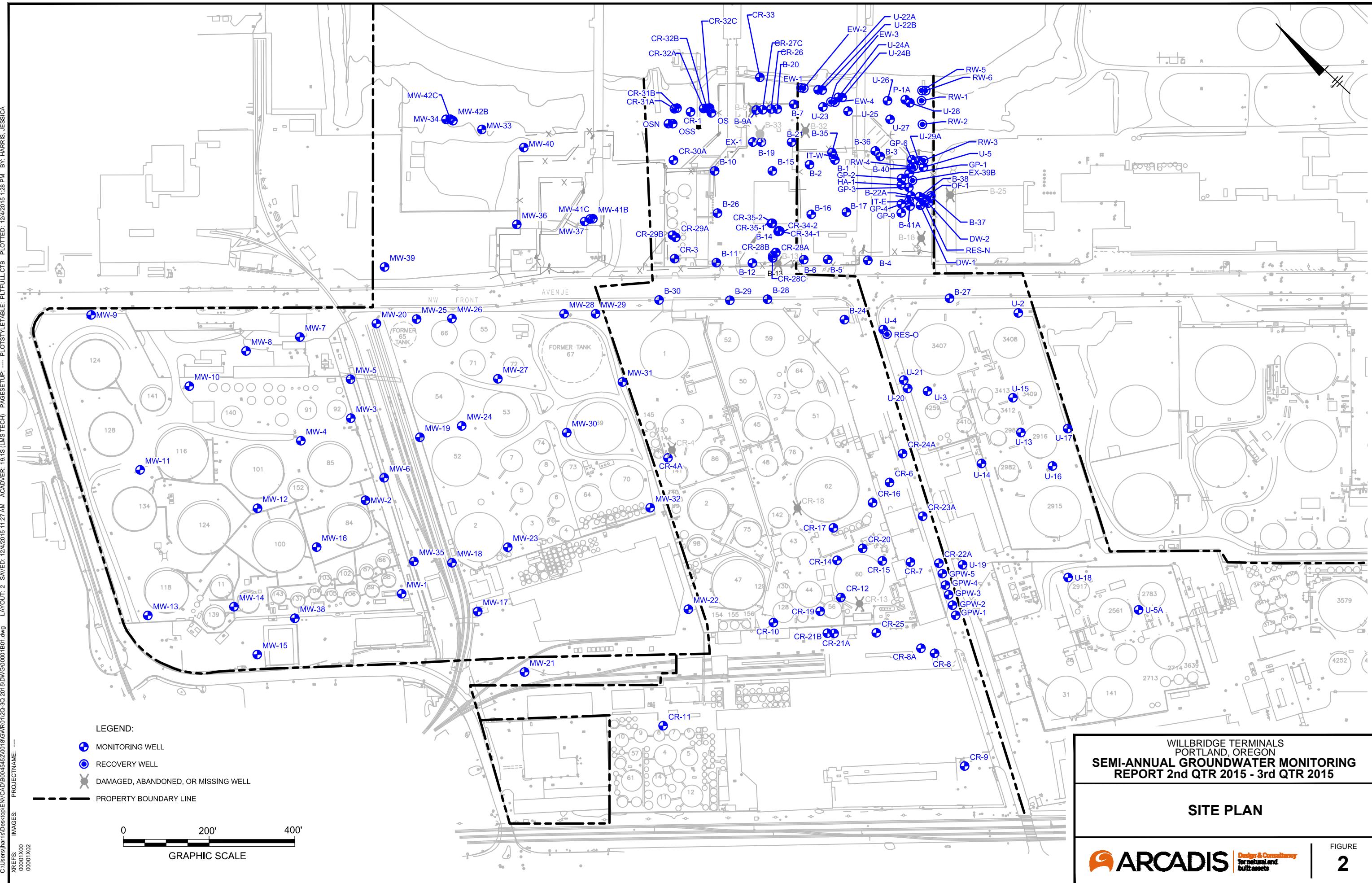
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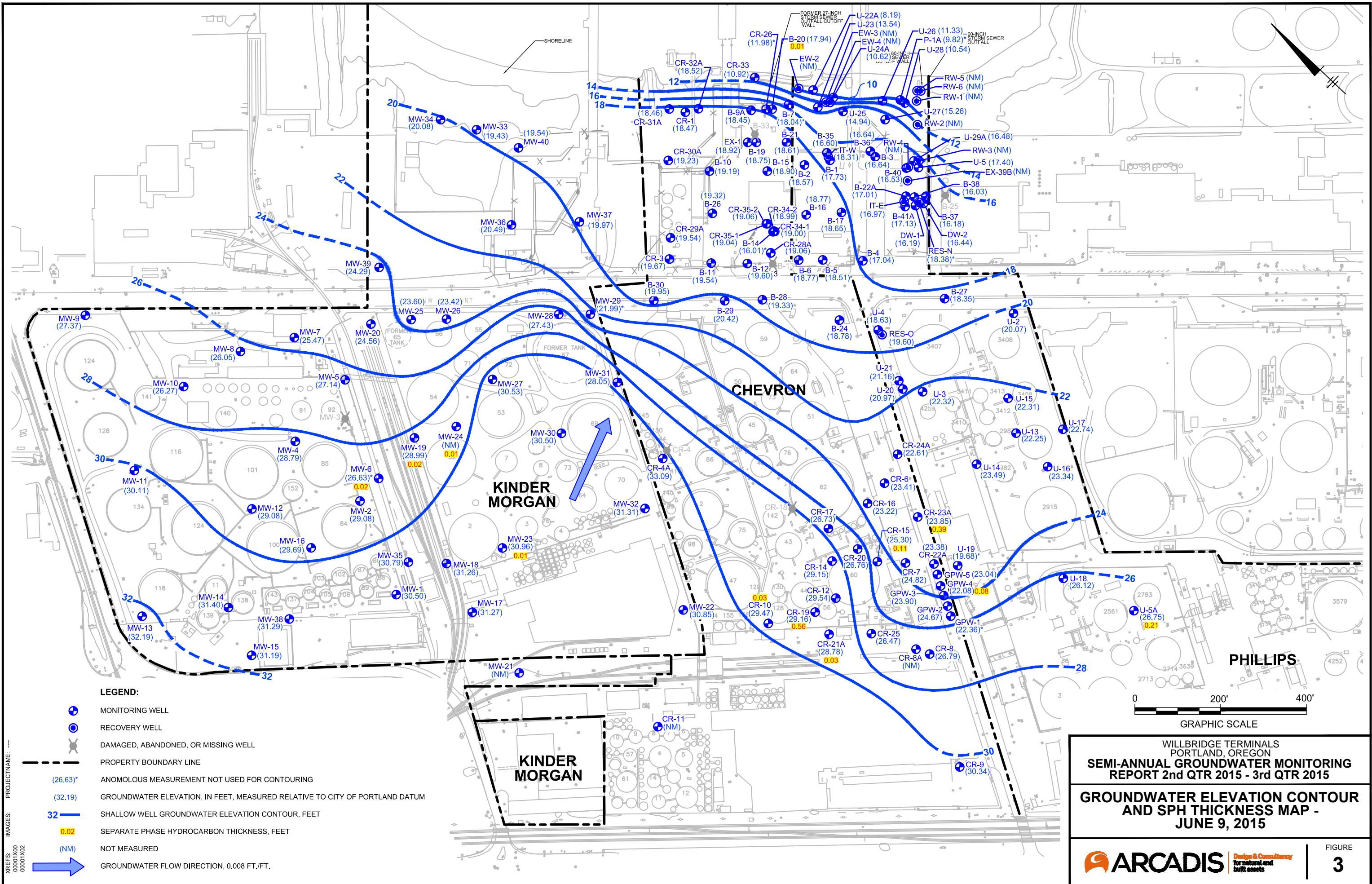


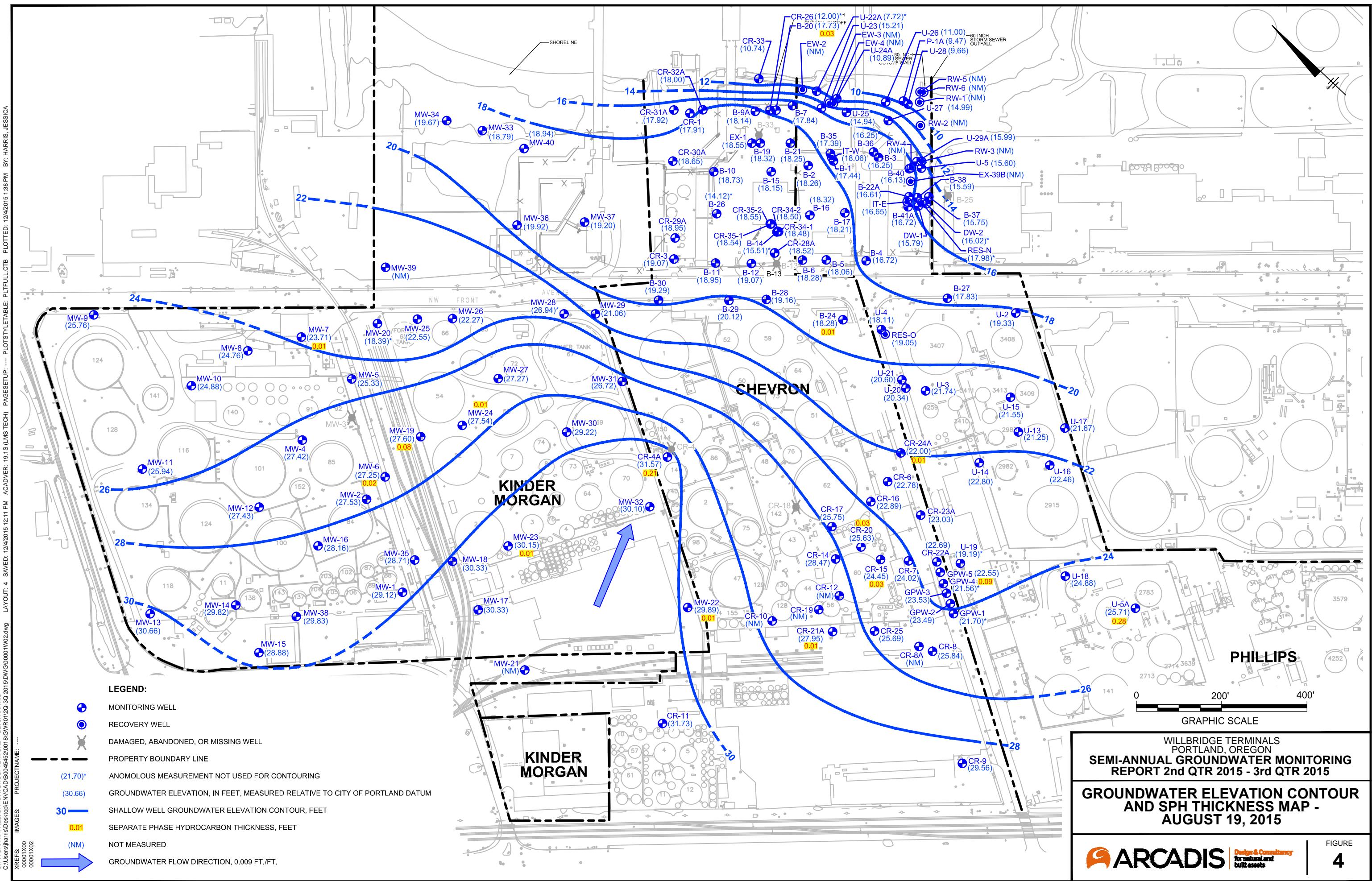
OREGON

WILLBRIDGE TERMINALS  
PORTLAND, OREGON

# SITE LOCATION MAP







**Tables**

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation (feet amsl)
(TOC)	Gauged	Groundwater	(feet)	(feet)	(feet amsl)
<b>B-7</b>	2/14/2000	18.33	NP	-	17.40
(35.73)	5/22/2000	18.60	NP	-	17.13
	8/22/2000	19.31	19.30	0.01	16.43
	11/27/2000	19.47	19.47	sheen	16.26
	2/20/2001	19.37	NP	-	16.36
	5/15/2001	19.36	19.36	sheen	16.37
	9/19/2001	19.74	NP	-	15.99
	12/20/2001	18.30	NP	-	17.43
	3/15/2002	18.28	NP	-	17.45
	9/23/2002	18.79	18.78	0.01	16.95
	12/19/2002	19.78	19.79	0.01	15.96
	3/19/2003	18.58	18.57	0.01	17.16
	6/24/2003	19.02	18.97	0.05	16.75
	9/24/2003	19.72	19.71	0.01	16.02
	12/26/2003	18.90	18.85	0.05	16.87
	3/30/2004	18.70	18.66	0.04	17.06
	6/24/2004	19.19	19.18	0.01	16.55
	9/27/2004	19.85	NP	-	15.88
	12/24/2004	19.27	NP	-	16.46
	3/7/2005	19.45	NP	-	16.28
	6/23/2005	19.12	NP	-	16.61
	9/19/2005	19.79	NP	-	15.94
	12/12/2005	19.00	NP	-	16.73
	1/30/2006	17.19	NP	-	18.54
	3/13/2006	18.05	NP	-	17.68
	6/26/2006	18.66	NP	-	17.07
	9/25/2006	16.98	NP	-	18.75
	12/11/2006	16.34	NP	-	19.39
	3/19/2007	16.13	NP	-	19.60
(33.85)	6/18/2007	16.76	NP	-	17.09
	9/17/2007	17.23	NP	-	16.62
	12/17/2007	16.49	NP	-	17.36
	1/22/2008	15.93	15.93	sheen	17.92
	3/24/2008	15.76	NP	-	18.09
	6/23/2008	16.31	NP	-	17.54
	9/22/2008	16.73	NP	-	17.12
	1/5/2009	15.59	NP	-	18.26
	3/16/2009	16.00	NP	-	17.85
	6/15/2009	16.21	NP	-	17.64
	9/14/2009	16.49	NP	-	17.36
	12/21/2009	15.75	NP	-	18.10
	3/16/2010	15.72	NP	-	18.13
	6/21/2010	15.50	NP	-	18.35
	9/20/2010	16.12	NP	-	17.73
	12/14/2010	15.09	NP	-	18.76
	3/21/2011	15.13	NP	-	18.72
	6/8/2011	14.10	NP	-	19.75
	9/26/2011	16.20	NP	-	17.65
	12/12/2011	15.85	NP	-	18.00
<b>B-7</b>	3/26/2012	15.20	NP	-	18.65
(33.85)	6/26/2012	15.53	NP	-	18.32

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

9/24/2012	16.15	NP	-	17.70
12/17/2012	15.03	NP	-	18.82
3/25/2013	15.58	NP	-	18.27
6/17/2013	15.53	NP	-	18.32
9/9/2013	16.99	NP	-	16.86
12/4/2013	15.91	NP	-	17.94
3/3/2014	14.31	NP	-	19.54
6/18/2014	15.61	NP	-	18.24
8/26/2014	15.97	NP	-	17.88
12/8/2014	15.30	NP	-	18.55
3/3/2015	15.58	NP	-	18.27
<b>6/9/2015</b>	<b>15.81</b>	<b>NP</b>	-	<b>18.04</b>
<b>8/19/2015</b>	<b>16.01</b>	<b>NP</b>	-	<b>17.84</b>
<b>B-9</b>	2/14/2000	16.29	16.20	0.09
(35.57)	5/22/2000	16.90	NP	-
	8/22/2000	17.48	NP	-
	11/27/2000	17.29	NP	-
	2/20/2001	17.41	NP	-
	5/15/2001	17.04	NP	-
	9/19/2001	17.84	NP	-
	12/20/2001	15.92	NP	-
	3/5/2002	15.92	NP	-
	9/23/2002	17.75	NP	-
	12/19/2002	17.28	NP	-
	3/19/2003	16.18	NP	-
	6/24/2003	16.63	NP	-
	9/24/2003	17.82	NP	-
	12/26/2003	Well covered by truck		
	3/30/2004	15.93	NP	-
	6/24/2004	17.12	NP	-
	9/27/2004	17.97	NP	-
	12/24/2004	17.32	NP	-
	3/7/2005	17.42	NP	-
	6/22/2005	16.19	NP	-
	9/19/2005	17.77	NP	-
	12/12/2005	16.81	NP	-
	1/30/2006	15.02	NP	-
	3/13/2006	18.65	NP	-
	6/26/2006	16.64	NP	-
	9/25/2006	16.45	NP	-
	12/11/2006	15.39	NP	-
	3/19/2007	15.45	NP	-
(33.89)	6/18/2007	16.14	NP	-
		Abandoned		
<b>B-9A</b>	9/17/2007	16.23	16.23	sheen
(33.58)	12/17/2007	15.53	NP	-
	1/22/2008	14.93	NP	-
	3/24/2008	14.90	NP	-
	6/23/2008	15.37	NP	-
	9/22/2008	15.94	NP	-
	1/5/2009	14.92	NP	-
<b>B-9A</b>	3/16/2009	15.28	NP	-
	6/15/2009	15.43	NP	-
	9/14/2009	15.83	NP	-
				17.75

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	12/21/2009	NM	NM	-	NM
	3/16/2010	14.91	NP	-	18.67
	6/21/2010	NM	NM	-	NM
	9/20/2010	15.44	NP	-	18.14
	12/14/2010	14.44	NP	-	19.14
	3/21/2011	14.18	NP	-	19.40
	6/8/2011	13.60	NP	-	19.98
	9/26/2011	15.47	NP	-	18.11
	12/12/2011	15.14	NP	-	18.44
	3/26/2012	14.40	NP	-	19.18
	6/26/2012	14.76	NP	-	18.82
	9/24/2012	15.40	NP	-	18.18
	12/17/2012	14.52	NP	-	19.06
	3/25/2013	20.81	NP	-	12.77
	6/17/2013	14.89	NP	-	18.69
	9/9/2013	15.33	NP	-	18.25
	12/4/2013	15.28	NP	-	18.30
	3/3/2014	14.69	NP	-	18.89
	6/18/2014	14.85	NP	-	18.73
	8/26/2014	15.30	NP	-	18.28
	12/8/2014	14.76	NP	-	18.82
	3/3/2015	14.75	NP	-	18.83
	<b>6/9/2015</b>	<b>15.13</b>	<b>NP</b>	-	<b>18.45</b>
	<b>8/19/2015</b>	<b>15.44</b>	<b>NP</b>	-	<b>18.14</b>
<b>B-10</b>	2/14/2000	15.10	NP	-	19.66
(34.76)	5/22/2000	15.67	NP	-	19.09
	8/22/2000	16.35	NP	-	18.41
	11/27/2000	16.64	NP	-	18.12
	2/20/2001	16.41	NP	-	18.35
	5/15/2001	16.42	NP	-	18.34
	9/19/2001	16.95	NP	-	17.81
	12/20/2001	15.42	NP	-	19.34
	3/15/2002	14.99	NP	-	19.77
	9/23/2002	16.64	NP	-	18.12
	12/19/2002	16.56	NP	-	18.20
	3/19/2003	15.24	NP	-	19.52
	6/24/2003	15.70	NP	-	19.06
	9/24/2003	16.62	NP	-	18.14
	12/26/2003	15.98	NP	-	18.78
	3/30/2004	15.29	NP	-	19.47
	6/24/2004	16.13	NP	-	18.63
	9/27/2004	16.73	NP	-	18.03
	12/14/2004	16.48	NP	-	18.28
	3/7/2005	Well Inaccessible			
	9/19/2005	16.64	NP	-	18.12
	12/12/2005	15.90	NP	-	18.86
	1/30/2006	14.13	NP	-	20.63
	3/13/2006	14.73	NP	-	20.03
	6/26/2006	15.67	NP	-	19.09
<b>B-10</b>	9/25/2006	16.45	NP	-	18.31
	12/11/2006	15.44	NP	-	19.32
	3/19/2007	14.92	NP	-	19.84
(34.78)	6/18/2007	15.88	NP	-	18.90
	9/17/2007	16.46	NP	-	18.32

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	12/17/2007	15.63	NP	-	19.15
	1/22/2008	14.84	14.83	0.01	19.95
	3/24/2008	15.01	NP	-	19.77
	6/23/2008	15.62	NP	-	19.16
	9/22/2008	16.41	NP	-	18.37
	1/5/2009		Well Inaccessible		
	3/16/2009	15.64	NP	-	19.14
	6/15/2009	15.71	NP	-	19.07
	9/14/2009	16.40	NP	-	18.38
	12/21/2009	15.73	NP	-	19.05
	3/16/2010	15.11	NP	-	19.67
	6/21/2010	15.97	NP	-	18.81
	9/20/2010	15.96	NP	-	18.82
	12/14/2010	14.67	NP	-	20.11
	3/21/2011	14.06	NP	-	20.72
	6/8/2011	14.36	NP	-	20.42
	9/26/2011	15.95	NP	-	18.83
	12/12/2011	15.60	NP	-	19.18
	3/26/2012	14.47	NP	-	20.31
	6/26/2012	14.94	NP	-	19.84
	9/24/2012	15.91	NP	-	18.87
	12/17/2012	14.89	NP	-	19.89
	3/25/2013	15.23	NP	-	19.55
	6/17/2013	15.35	NP	-	19.43
	9/9/2013	15.94	NP	-	18.84
	12/4/2013	15.83	NP	-	18.95
	3/3/2014	15.20	NP	-	19.58
	6/18/2014	15.19	NP	-	19.59
	8/26/2014	15.77	NP	-	19.01
	12/8/2014	15.42	NP	-	19.36
	3/3/2015	15.01	NP	-	19.77
	<b>6/9/2015</b>	<b>15.59</b>	<b>NP</b>	-	<b>19.19</b>
	<b>8/19/2015</b>	<b>16.05</b>	<b>NP</b>	-	<b>18.73</b>
<b>B-11</b>	5/22/2000	15.41	NP	-	19.55
(34.96)	8/22/2000	16.14	NP	-	18.82
	11/27/2000	16.57	NP	-	18.39
	2/20/2001	16.30	16.30	sheen	18.66
	5/15/2001	16.30	NP	-	18.66
	9/19/2001	16.82	NP	-	18.14
	12/20/2001	15.44	NP	-	19.52
	3/15/2002	14.80	NP	-	20.16
	9/23/2002	16.49	NP	-	18.47
	12/19/2002	16.61	16.61	sheen	18.35
	3/19/2003	15.11	NP	-	19.85
	6/24/2003	15.52	NP	-	19.44
	9/24/2003	16.48	NP	-	18.48
	12/26/2003	15.85	NP	-	19.11
	3/30/2004	15.09	NP	-	19.87
<b>B-11</b>	6/24/2004	15.98	NP	-	18.98
	9/27/2004	16.67	NP	-	18.29
	12/14/2004	16.34	NP	-	18.62
	3/7/2005	16.14	NP	-	18.82
	6/22/2005	15.80	NP	-	19.16
	9/19/2005	16.48	NP	-	18.48

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	12/12/2005	15.79	NP	-	19.17
	1/30/2006	13.94	NP	-	21.02
	3/13/2006	14.53	NP	-	20.43
	6/26/2006	15.49	NP	-	19.47
	9/25/2006	16.36	16.36	sheen	18.60
	12/11/2006	15.35	NP	-	19.61
	3/19/2007	14.74	NP	-	20.22
(34.99)	6/18/2007	15.74	NP	-	19.25
	9/17/2007	16.54	NP	-	18.45
	12/17/2007	15.60	NP	-	19.39
	1/22/2008	14.55	NP	-	20.44
	3/24/2008	14.85	NP	-	20.14
	6/23/2008	15.49	NP	-	19.50
	9/22/2008	16.31	NP	-	18.68
	1/5/2009	15.29	NP	-	19.70
	3/16/2009	15.53	NP	-	19.46
	6/15/2009	15.59	NP	-	19.40
	9/14/2009	16.29	NP	-	18.70
	12/21/2009	15.80	NP	-	19.19
	3/16/2010	15.01	NP	-	19.98
	6/21/2010	14.82	NP	-	20.17
	9/20/2010	15.90	NP	-	19.09
	12/14/2010	14.70	NP	-	20.29
	3/21/2011	13.90	NP	-	21.09
	6/8/2011	14.43	NP	-	20.56
	9/26/2011	15.83	NP	-	19.16
	12/12/2011	15.57	NP	-	19.42
	3/26/2012	14.40	NP	-	20.59
	6/26/2012	14.78	NP	-	20.21
	9/24/2012	15.78	NP	-	19.21
	12/17/2012	14.83	NP	-	20.16
	3/25/2013	15.09	NP	-	19.90
	6/17/2013	15.22	NP	-	19.77
	9/9/2013	15.86	NP	-	19.13
	12/4/2013	15.81	NP	-	19.18
	3/3/2014	15.18	NP	-	19.81
	6/18/2014	15.00	NP	-	19.99
	8/26/2014	15.63	NP	-	19.36
	12/8/2014	15.36	NP	-	19.63
	3/3/2015	14.86	NP	-	20.13
	<b>6/9/2015</b>	<b>15.45</b>	<b>NP</b>	<b>-</b>	<b>19.54</b>
	<b>8/19/2015</b>	<b>16.04</b>	<b>NP</b>	<b>-</b>	<b>18.95</b>
<b>B-12</b>	2/14/2000	15.38	NP	-	19.76
(35.14)	5/22/2000	15.85	NP	-	19.29
	8/22/2000	16.55	NP	-	18.59
	11/27/2000	16.98	NP	-	18.16
<b>B-12</b>	2/20/2001	16.73	NP	-	18.41
	5/15/2001	16.72	NP	-	18.42
	9/19/2001	17.20	NP	-	17.94
	12/20/2001	15.94	NP	-	19.20
	3/15/2002	15.32	NP	-	19.82
	9/23/2002	16.89	NP	-	18.25
	12/19/2002	17.01	NP	-	18.13
	3/19/2003	15.56	NP	-	19.58

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	6/24/2003		Not Located		
	9/24/2003		Not Located		
	12/26/2003		Not Located		
	3/30/2004		Not Located		
	6/24/2004	16.40	NP	-	18.74
	9/27/2004	17.00	NP	-	18.14
	12/14/2004	16.75	NP	-	18.39
	3/7/2005	16.52	NP	-	18.62
	9/19/2005	16.87	NP	-	18.27
	12/12/2005	16.20	NP	-	18.94
	1/30/2006	14.49	NP	-	20.65
	3/13/2006	15.02	NP	-	20.12
	6/26/2006	15.95	NP	-	19.19
	9/25/2006	16.78	NP	-	18.36
	12/11/2006	15.84	NP	-	19.30
	3/19/2007	15.24	NP	-	19.90
(35.17)	6/18/2007	16.18	NP	-	18.99
	9/17/2007	16.92	NP	-	18.25
	12/17/2007	16.06	NP	-	19.11
	1/22/2008	15.12	NP	-	20.05
	3/24/2008	15.33	NP	-	19.84
	6/23/2008	15.92	NP	-	19.25
	9/22/2008	16.71	NP	-	18.46
	1/5/2009	15.73	NP	-	19.44
	3/16/2009	15.96	NP	-	19.21
	6/15/2009	15.96	NP	-	19.21
(35.44)	9/14/2009	16.67	NP	-	18.77
	12/21/2009	16.21	NP	-	19.23
	3/16/2010	15.50	NP	-	19.94
	6/21/2010	15.26	NP	-	20.18
	9/20/2010	16.31	NP	-	19.13
	12/14/2010	15.16	NP	-	20.28
	3/21/2011	14.39	NP	-	21.05
	6/8/2011	14.80	NP	-	20.64
	9/26/2011	16.22	NP	-	19.22
	12/12/2011	15.94	NP	-	19.50
	3/26/2012	14.85	NP	-	20.59
	6/26/2012	15.13	NP	-	20.31
	9/24/2012	16.13	NP	-	19.31
	12/17/2012	15.12	NP	-	20.32
	3/25/2013	15.52	NP	-	19.92
	6/17/2013	15.56	NP	-	19.88
	9/9/2013	16.18	NP	-	19.26
	12/4/2013	NM	NM	NM	NM
<b>B-12</b>	3/3/2014	15.55	NP	-	19.89
	6/18/2014	15.38	NP	-	20.06
	8/26/2014	16.00	NP	-	19.44
	12/8/2014	15.68	NP	-	19.76
	3/3/2015	15.27	NP	-	20.17
	<b>6/9/2015</b>	<b>15.84</b>	<b>NP</b>	<b>-</b>	<b>19.60</b>
	<b>8/19/2015</b>	<b>16.37</b>	<b>NP</b>	<b>-</b>	<b>19.07</b>
<b>B-13</b>	2/14/2000	15.46	NP	-	19.30
(34.76)	5/22/2000	15.86	NP	-	18.90
	8/22/2000	16.46	NP	-	18.30

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	11/27/2000	19.91	NP	-	14.85
	2/20/2001	16.65	NP	-	18.11
	5/15/2001	16.65	NP	-	18.11
	9/19/2001	17.09	NP	-	17.67
	12/22/2001	15.94	NP	-	18.82
	3/15/2002	15.37	NP	-	19.39
	9/23/2002	16.82	NP	-	17.94
	12/19/2002	16.95	NP	-	17.81
	3/19/2003	15.62	NP	-	19.14
	6/24/2003	15.96	NP	-	18.80
	9/24/2003	16.82	NP	-	17.94
	12/26/2003	16.29	NP	-	18.47
	3/30/2004	15.58	NP	-	19.18
	6/24/2004	16.34	NP	-	18.42
	9/27/2004	16.90	NP	-	17.86
	12/24/2004	16.71	NP	-	18.05
	3/7/2005	16.49	NP	-	18.27
	9/19/2005	16.79	NP	-	17.97
	12/12/2005	16.16	NP	-	18.60
	1/30/2006	14.54	NP	-	20.22
	3/13/2006	15.04	NP	-	19.72
	6/26/2006	15.95	NP	-	18.81
	9/25/2006	16.78	NP	-	17.98
	12/11/2006	15.82	NP	-	18.94
	3/19/2007	15.26	NP	-	19.50
(34.87)	6/18/2007	16.14	NP	-	18.73
			Abandoned		
<b>B-14</b>	2/14/2000	17.27	NP	-	19.32
(36.59)	5/22/2000	17.69	NP	-	18.90
	8/22/2000	18.31	NP	-	18.28
	11/27/2000	18.72	NP	-	17.87
	2/20/2001	18.50	NP	-	18.09
	5/15/2001	18.49	NP	-	18.10
	9/19/2001	18.87	NP	-	17.72
	12/22/2001	17.74	NP	-	18.85
	3/15/2002	17.21	NP	-	19.38
	9/23/2002	18.64	NP	-	17.95
	12/19/2002	18.79	NP	-	17.80
	3/19/2003	17.47	NP	-	19.12
	6/24/2003	17.78	NP	-	18.81
	9/24/2003	18.64	NP	-	17.95
	12/26/2003	18.10	NP	-	18.49
<b>B-14</b>	3/30/2004	17.39	NP	-	19.20
	6/24/2004	18.17	NP	-	18.42
	9/27/2004	18.73	NP	-	17.86
	12/14/2004	18.54	NP	-	18.05
	3/7/2005	18.30	NP	-	18.29
	9/19/2005	18.63	NP	-	17.96
	12/12/2005	17.99	NP	-	18.60
	1/30/2006	16.43	NP	-	20.16
	3/13/2006	16.86	NP	-	19.73
	6/26/2006	17.72	NP	-	18.87
	9/25/2006	18.45	NP	-	18.14
	12/11/2006	17.62	NP	-	18.97

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	3/19/2007	17.04	NP	-	19.55
(36.62)	6/18/2007	17.92	NP	-	18.70
	9/17/2007	18.58	NP	-	18.04
	12/17/2007	17.81	NP	-	18.81
	1/22/2008	16.98	Trace	-	19.64
	3/24/2008	17.13	NP	-	19.49
	6/23/2008	17.70	NP	-	18.92
	9/22/2008	18.39	NP	-	18.23
	1/5/2009	17.90	NP	-	18.72
	3/16/2009	NM	NM	NM	NM
	6/15/2009	NM	NM	NM	NM
	9/14/2009	18.36	NP	-	NM
	12/21/2009	17.94	NP	-	NM
	3/16/2010	17.28	NP	-	NM
	6/21/2010	17.00	NP	-	NM
	9/20/2010	18.02	NP	-	NM
	12/14/2010	NM	NM	NM	NM
	3/21/2011	NM	NM	NM	NM
	6/8/2011	NM	NP	-	NM
	9/26/2011	17.93	NP	-	18.69
	12/12/2011	17.66	NP	-	18.96
	3/26/2012	16.69	NP	-	19.93
	6/26/2012	17.00	NP	-	19.62
	9/24/2012	17.88	NP	-	18.74
	12/17/2012	17.08	NP	-	19.54
	3/25/2013	17.24	NP	-	19.38
	6/17/2013	17.37	NP	-	19.25
	9/9/2013	17.95	NP	-	18.67
	12/4/2013	17.91	NP	-	18.71
	3/3/2014	17.35	NP	-	19.27
	6/18/2014	17.20	NP	-	19.42
	8/26/2014	17.75	NP	-	18.87
	12/8/2014	17.50	NP	-	19.12
	3/3/2015	17.06	NP	-	19.56
(33.62)	<b>6/9/2015</b>	<b>17.61</b>	<b>NP</b>	-	16.01
	<b>8/19/2015</b>	<b>18.11</b>	<b>NP</b>	-	15.51
<b>B-15</b>	2/14/2000	16.48	NP	-	19.07
(35.55)	5/22/2000	16.88	NP	-	18.67
	8/22/2000	17.53	NP	-	18.02
	11/27/2000	17.89	NP	-	17.66
<b>B-15</b>	2/20/2001	17.38	NP	-	18.17
	5/15/2001	17.66	NP	-	17.89
	9/19/2001	18.12	NP	-	17.43
	12/20/2001	16.92	NP	-	18.63
	3/15/2002	16.36	NP	-	19.19
	9/23/2002	17.84	NP	-	17.71
	12/19/2002	18.01	NP	-	17.54
	3/19/2003	16.66	NP	-	18.89
	6/24/2003	16.98	NP	-	18.57
	9/24/2003	17.84	NP	-	17.71
	12/26/2003	17.27	NP	-	18.28
	3/30/2004	16.58	NP	-	18.97
	6/24/2004	17.37	NP	-	18.18
	9/27/2004	17.94	NP	-	17.61

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**

Chevron - Willbridge Terminal  
 Portland, Oregon

	12/14/2004	17.73	NP	-	17.82
	3/7/2005	17.51	NP	-	18.04
	9/19/2005	17.84	NP	-	17.71
	12/12/2005	17.20	NP	-	18.35
	1/30/2006	15.61	NP	-	19.94
	3/13/2006	16.07	NP	-	19.48
	6/26/2006	16.91	NP		18.64
	9/25/2006	17.52	NP	-	18.03
	12/11/2006	16.65	NP	-	18.90
	3/19/2007	16.17	NP	-	19.38
(35.58)	6/18/2007	17.02	NP	-	18.56
	9/17/2007	17.67	NP	-	17.91
	12/17/2007	16.86	NP	-	18.72
	1/22/2008	16.11	NP	-	19.47
	3/24/2008	16.25	NP	-	19.33
	6/23/2008	16.76	NP	-	18.82
	9/22/2008	17.46	NP	-	18.12
	1/5/2009	16.62	NP	-	18.96
	3/16/2009	16.80	NP	-	18.78
	6/15/2009	NM	NM	NM	NM
	9/14/2009	16.43	NP	-	19.15
	12/21/2009	16.94	NP	-	18.64
	3/16/2010	16.36	NP	-	19.22
	6/21/2010	16.18	NP	-	19.40
	9/20/2010	17.10	NP	-	18.48
	12/14/2010	16.11	NP	-	19.47
	3/21/2011	15.43	NP	-	20.15
	6/8/2011	15.56	NP	-	20.02
	9/26/2011	16.98	NP	-	18.60
	12/12/2011	16.73	NP	-	18.85
	3/26/2012	15.78	NP	-	19.80
	6/26/2012	16.12	NP	-	19.46
	9/24/2012	16.94	NP	-	18.64
	12/17/2012	16.15	NP	-	19.43
	3/25/2013	16.36	NP	-	19.22
	6/17/2013	16.45	NP	-	19.13
	9/9/2013	17.01	NP	-	18.57
	12/4/2013	16.97	NP	-	18.61
<b>B-15</b>	3/3/2014	16.36	NP	-	19.22
	6/18/2014	16.31	NP	-	19.27
	8/26/2014	16.90	NP	-	18.68
	12/8/2014	16.53	NP	-	19.05
	3/3/2015	16.17	NP	-	19.41
	<b>6/9/2015</b>	<b>16.68</b>	<b>NP</b>	-	<b>18.90</b>
	<b>8/19/2015</b>	<b>17.43</b>	<b>NP</b>	-	<b>18.15</b>
<b>B-19</b>	2/14/2000	15.99	NP	-	18.18
(34.17)	5/22/2000	16.34	NP	-	17.83
	8/22/2000	17.04	NP	-	17.13
	11/27/2000	17.35	NP	-	16.82
	2/20/2001	17.17	NP	-	17.00
	5/15/2001	17.14	NP	-	17.03
	9/19/2001	17.67	NP	-	16.50
	12/20/2001	16.32	NP	-	17.85
	3/15/2002	15.88	NP	-	18.29

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**

Chevron - Willbridge Terminal  
 Portland, Oregon

	9/23/2002	17.37	NP	-	16.80
	12/19/2002	18.47	NP	-	15.70
	3/19/2003	16.13	NP	-	18.04
	6/24/2003	16.50	NP	-	17.67
	9/24/2003	17.35	NP	-	16.82
	12/26/2003	16.71	NP	-	17.46
	3/30/2004	16.08	NP	-	18.09
	6/24/2004	16.87	NP	-	17.30
	9/27/2004	17.44	NP	-	16.73
	12/14/2004	17.28	NP	-	16.89
	3/7/2005	17.02	NP	-	17.15
	6/22/2005	16.72	NP	-	17.45
	9/19/2005	17.34	NP	-	16.83
	12/12/2005	16.69	NP	-	17.48
	1/30/2006	15.06	NP	-	19.11
	3/13/2006	15.55	NP	-	18.62
	6/26/2006	16.36	NP	-	17.81
	9/25/2006	16.76	16.76	sheen	17.41
	12/11/2006	15.94	NP	-	18.23
	3/19/2007	15.50	NP	-	18.67
	6/18/2007	16.31	NP	-	17.86
	9/17/2007	16.93	NP	-	17.24
(34.66)	12/17/2007	16.08	NP	-	18.58
	1/22/2008	15.44	NP	-	19.22
	3/24/2008	15.56	NP	-	19.10
	6/23/2008	16.02	NP	-	18.64
	9/22/2008	16.69	NP	-	17.97
	1/5/2009	15.72	NP	-	18.94
	3/16/2009	16.01	NP	-	18.65
	6/15/2009	16.11	NP	-	18.55
	9/14/2009	16.64	NP	-	18.02
	12/21/2009	16.02	NP	-	18.64
	3/16/2010	15.57	NP	-	19.09
	6/21/2010	15.40	NP	-	19.26
	9/20/2010	16.25	NP	-	18.41
	12/14/2010	15.22	NP	-	19.44
<b>B-19</b>	3/21/2011	14.71	NP	-	19.95
	6/8/2011	14.69	NP	-	19.97
	9/26/2011	16.23	NP	-	18.43
	12/12/2011	15.95	NP	-	18.71
	3/26/2012	15.06	NP	-	19.60
	6/26/2012	15.41	NP	-	19.25
	9/24/2012	16.17	NP	-	18.49
	12/17/2012	15.32	NP	-	19.34
	3/25/2013	15.56	NP	-	19.10
	6/17/2013	15.68	NP	-	18.98
	9/9/2013	16.19	NP	-	18.47
	12/4/2013	16.15	NP	-	18.51
	3/3/2014	15.51	NP	-	19.15
	6/18/2014	15.56	NP	-	19.10
	8/26/2014	16.13	NP	-	18.53
	12/8/2014	15.63	NP	-	19.03
	3/3/2015	15.42	NP	-	19.24
	<b>6/9/2015</b>	<b>15.91</b>	<b>NP</b>	<b>-</b>	<b>18.75</b>

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	<b>8/19/2015</b>	<b>16.34</b>	<b>NP</b>	-	<b>18.32</b>
<b>B-20</b>	2/14/2000	16.62	NP	-	16.70
(33.32)	5/22/2000	16.93	NP	-	16.39
	8/22/2000	17.78	NP	-	15.54
	11/27/2000	17.99	17.99	sheen	15.33
	2/20/2001	17.79	17.79	sheen	15.53
	5/15/2001	17.89	NP	-	15.43
	9/19/2001	18.40	NP	-	14.92
	12/20/2001	16.61	NP	-	16.71
	3/15/2002	16.45	NP	-	16.87
	9/23/2002	18.27	NP	-	15.05
	12/19/2002	18.22	NP	-	15.10
	3/19/2003	15.96	NP	-	17.36
	6/24/2003	17.06	NP	-	16.26
	9/24/2003	18.30	NP	-	15.02
	12/26/2003	17.31	NP	-	16.01
	3/30/2004	16.47	NP	-	16.85
	6/24/2004	17.32	NP	-	16.00
	9/27/2004	18.29	NP	-	15.03
	12/14/2004	17.77	NP	-	15.55
	3/7/2005	17.82	NP	-	15.50
	6/23/2005	17.41	NP	-	15.91
	9/19/2005	18.20	NP	-	15.12
	12/12/2005	17.34	NP	-	15.98
	1/30/2006	15.70	NP	-	17.62
	3/13/2006	16.09	NP	-	17.23
	6/26/2006	16.96	NP	-	16.36
	9/25/2006	16.38	NP	-	16.94
	12/11/2006	16.02	NP	-	17.30
	3/19/2007	15.87	NP	-	17.45
(33.33)	6/18/2007	16.29	NP	-	17.04
	9/17/2007	16.59	16.59	sheen	16.74
	12/17/2007	16.07	NP	-	17.26
	1/22/2008	15.63	NP	-	17.70
	3/24/2008	15.48	NP	-	17.85
<b>B-20</b>	6/23/2008	15.92	15.91	0.01	17.42
	9/22/2008	16.11	NP	-	17.22
	1/5/2009	15.16	15.07	0.09	18.24
	3/16/2009	15.59	NP	-	17.74
	6/15/2009	15.82	NP	-	17.51
	9/14/2009	16.07	16.04	0.03	17.28
	12/21/2009	15.35	15.34	0.01	17.99
	3/16/2010	15.27	NP	-	18.06
	6/21/2010	15.20	NP	-	18.13
	9/20/2010	15.66	NP	-	17.67
	12/14/2010	14.83	NP	-	18.50
	3/21/2011	14.78	14.71	0.07	18.61
	6/8/2011	13.64	NP	-	19.69
	9/26/2011	15.85	15.75	0.10	17.56
	12/12/2011	15.50	15.48	0.02	17.85
	3/26/2012	14.91	14.85	0.06	18.47
	6/26/2012	15.13	NP	-	18.20
	9/24/2012	15.79	15.73	0.06	17.59
	12/17/2012	14.66	14.65	0.01	18.68

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	3/25/2013	22.04	NP	-	11.29
	6/17/2013	15.26	15.25	0.01	18.08
	9/9/2013	15.51	15.50	-	17.82
	12/4/2013	15.42	15.41	0.01	17.92
	3/3/2014	14.94	14.91	-	18.39
	6/18/2014	15.24	NP	-	18.09
	8/26/2014	15.58	15.55	0.03	17.77
	12/8/2014	14.91	14.89	0.02	18.44
	3/3/2015	15.11	NP	0.00	18.22
	<b>6/9/2015</b>	<b>15.40</b>	<b>15.39</b>	<b>0.01</b>	<b>17.94</b>
	<b>8/19/2015</b>	<b>15.62</b>	<b>15.59</b>	<b>0.03</b>	<b>17.73</b>
<b>B-21</b>	2/14/2000	16.22	NP	-	18.57
(34.79)	5/22/2000	16.57	NP	-	18.22
	8/22/2000	17.15	NP	-	17.64
	11/27/2000	17.45	NP	-	17.34
	2/20/2001	19.29	NP	-	15.50
	5/15/2001	17.27	NP	-	17.52
	9/19/2001	17.66	NP	-	17.13
	12/20/2001	16.48	NP	-	18.31
	3/15/2002	16.18	NP	-	18.61
	9/23/2002	17.45	NP	-	17.34
	12/19/2002	17.56	NP	-	17.23
	3/19/2003	16.35	NP	-	18.44
	6/24/2003	16.70	NP	-	18.09
	9/24/2003	17.42	NP	-	17.37
	12/26/2003	16.91	NP	-	17.88
	3/30/2004	16.36	NP	-	18.43
	6/24/2004	17.02	NP	-	17.77
	9/27/2004	17.49	NP	-	17.30
	12/14/2004	17.41	NP	-	17.38
	3/7/2005	17.04	NP	-	17.75
	6/23/2005	16.87	NP	-	17.92
	9/19/2005	17.45	NP	-	17.34
	12/12/2005	16.84	NP	-	17.95
<b>B-21</b>	1/30/2006	15.30	NP	-	19.49
	3/13/2006	15.93	NP	-	18.86
	6/26/2006	16.62	NP	-	18.17
	9/25/2006	16.98	NP	-	17.81
	12/11/2006	16.23	NP	-	18.56
	3/19/2007	15.88	NP	-	18.91
(34.82)	6/18/2007	16.60	NP	-	18.22
	9/17/2007	17.14	NP	-	17.68
	12/17/2007	16.40	NP	-	18.42
	1/22/2008	15.78	NP	-	19.04
	3/24/2008	15.87	NP	-	18.95
	6/23/2008	16.34	NP	-	18.48
	9/22/2008	16.92	NP	-	17.90
	1/5/2009	15.93	NP	-	18.89
	3/16/2009	16.35	NP	-	18.47
	6/15/2009	16.42	NP	-	18.40
	9/14/2009	16.84	NP	-	17.98
	12/21/2009	16.30	NP	-	18.52
	3/16/2010	15.93	NP	-	18.89
	6/21/2010	15.78	NP	-	19.04

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	9/20/2010	16.55	NP	-	18.27
	12/14/2010		Inaccessible (vehicle)		
	3/21/2011	15.16	NP	-	19.66
	6/8/2011		Inaccessible (vehicle)		
	9/26/2011	16.51	NP	-	18.31
	12/12/2011	16.21	NP	-	18.61
	3/26/2012	15.40	NP	-	19.42
	6/26/2012	15.80	NP	-	19.02
	9/24/2012	16.46	NP	-	18.36
	12/17/2012	15.63	NP	-	19.19
	3/25/2013	15.95	NP	-	18.87
	6/17/2013	15.99	NP	-	18.83
	9/9/2013	16.48	NP	-	18.34
	12/4/2013	16.41	NP	-	18.41
	3/3/2014	15.82	NP	-	19.00
	6/18/2014	15.92	NP	-	18.90
	8/26/2014	16.36	NP	-	18.46
	12/8/2014	15.94	NP	-	18.88
	3/3/2015	15.81	NP	-	19.01
	<b>6/9/2015</b>	<b>16.21</b>	<b>NP</b>	<b>-</b>	<b>18.61</b>
	<b>8/19/2015</b>	<b>16.57</b>	<b>NP</b>	<b>-</b>	<b>18.25</b>
<b>B-24</b>	2/14/2000	15.50	15.49	0.01	19.21
(34.70)	5/22/2000	15.83	NP	-	18.87
	8/22/2000	16.38	NP	-	18.32
	11/27/2000	16.81	NP	-	17.89
	2/20/2001	16.59	NP	-	18.11
	5/15/2001	16.56	NP	-	18.14
	9/19/2001	16.94	NP	-	17.76
	12/22/2001	16.23	16.07	0.16	18.60
	3/15/2002	15.54	15.54	Sheen	19.16
	9/23/2002	16.86	16.73	0.13	17.94
	12/19/2002	16.98	NP	-	17.72
<b>B-24</b>	3/19/2003	15.84	15.71	0.13	18.96
	6/24/2003	15.90	15.90	Sheen	18.80
	9/24/2003	16.75	16.71	0.04	17.98
	12/26/2003	16.32	16.29	0.03	18.40
	3/30/2004	15.51	NP	-	19.19
	6/24/2004	16.58	16.21	0.37	18.42
	9/27/2004	16.76	16.75	0.01	17.95
	12/14/2004	16.64	16.64	Sheen	18.06
	3/7/2005	16.44	16.43	0.01	18.27
	6/23/2005	NM	NM	NM	NM
	9/19/2005	16.63	16.61	0.02	18.09
	12/12/2005		Inaccessible		
	3/13/2006	15.06	15.04	0.02	19.66
	6/26/2006	15.87	15.84	0.03	18.85
	9/25/2006	16.60	NP	-	18.10
	12/11/2006	15.84	15.84	sheen	18.86
	3/19/2007	15.21	NP	-	19.49
	6/18/2007	6.14	6.14	sheen	28.56
	9/17/2007	-	-	-	-
	12/17/2007	16.16	NP	-	18.54
	1/22/2008	14.25	14.22	0.03	20.47
	3/24/2008	15.29	15.26	0.03	19.43

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	6/23/2008	15.93	15.90	0.03	18.79
	9/22/2008	16.61	16.59	0.02	18.11
	1/5/2009	15.70	NP	-	19.00
	3/16/2009	NM	NM	NM	NM
	6/15/2009	15.96	15.95	0.01	18.75
	9/14/2009		Inaccessible		
	12/21/2009	16.18	NP	-	18.52
	3/16/2010	15.45	NP	-	19.25
	6/21/2010	15.34	NP	-	19.36
	9/20/2010	16.17	NP	-	18.53
	12/14/2010		Inaccessible (paved over)		
	3/21/2011	14.41	NP	-	20.29
	6/8/2011	14.98	NP	-	19.72
	9/26/2011	16.24	NP	-	18.46
	12/12/2011	16.00	NP	-	18.70
	3/26/2012	14.90	NP	-	19.80
	6/26/2012	15.21	NP	-	19.49
	9/24/2012		Inaccessible		
	12/17/2012	15.28	NP	-	19.42
	3/25/2013	15.50	NP	-	19.20
	6/17/2013	15.60	NP	-	19.10
	9/9/2013	16.21	16.20	-	18.49
	12/4/2013	16.22	NP	-	18.48
	3/3/2013	NM	NM	NM	NM
	6/18/2014	15.42	NP	-	19.28
	8/26/2014	16.02	NP	-	18.68
	12/8/2014	15.47	NP	-	19.23
	3/3/2015	15.38	NP	-	19.32
	<b>6/9/2015</b>	<b>15.92</b>	<b>NP</b>	-	<b>18.78</b>
	<b>8/19/2015</b>	<b>16.43</b>	<b>16.42</b>	<b>0.01</b>	<b>18.28</b>
<b>B-26</b>	2/14/2000	15.49	NP	-	19.81
(35.30)	5/22/2000	15.96	NP	-	19.34
	8/22/2000	16.72	NP	-	18.58
	11/27/2000	17.11	NP	-	18.19
	2/20/2001	16.86	NP	-	18.44
	5/15/2001	16.86	NP	-	18.44
	9/19/2001	17.37	NP	-	17.93
	12/20/2001	15.93	NP	-	19.37
	3/15/2002	15.41	NP	-	19.89
	9/23/2002	17.06	NP	-	18.24
	12/19/2002	17.10	NP	-	18.20
	3/19/2003	15.69	NP	-	19.61
	6/24/2003	16.13	NP	-	19.17
	9/24/2003	17.06	NP	-	18.24
	12/26/2003	16.39	NP	-	18.91
	3/30/2004	16.68	NP	-	18.62
	6/24/2004	16.54	NP	-	18.76
	9/27/2004	17.18	NP	-	18.12
	12/14/2004	16.96	NP	-	18.34
	3/7/2005	16.69	NP	-	18.61
	6/22/2005	16.35	NP	-	18.95
	9/19/2005	17.08	NP	-	18.22
	12/12/2005	16.33	NP	-	18.97
	1/30/2006	14.46	NP	-	20.84

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	3/13/2006	15.15	NP	-	20.15
	6/26/2006	16.09	NP	-	19.21
	9/25/2006	16.92	16.92	sheen	18.38
	12/11/2006	15.83	NP	-	19.47
	3/19/2007	15.32	NP	-	19.98
(35.33)	6/18/2007	16.32	NP	-	19.01
	9/17/2007	17.07	NP	-	18.26
	12/17/2007	16.11	NP	-	19.22
	1/22/2008	15.24	NP	-	20.09
	3/24/2008	15.42	NP	-	19.91
	6/23/2008	16.05	NP	-	19.28
	9/22/2008	16.84	NP	-	18.49
	1/5/2009	15.70	NP	-	19.63
	3/16/2009	16.10	NP	-	19.23
	6/15/2009	16.12	NP	-	19.21
	9/14/2009	16.82	NP	-	18.51
	12/21/2009	16.26	NP	-	19.07
	3/16/2010	15.50	NP	-	19.83
	6/21/2010	15.39	NP	-	19.94
	9/20/2010	16.42	NP	-	18.91
	12/14/2010	15.22	NP	-	20.11
	3/21/2011	14.49	NP	-	20.84
	6/8/2011	14.91	NP	-	20.42
	9/26/2011	16.38	NP	-	18.95
	12/12/2011	16.08	NP	-	19.25
	3/26/2012	14.96	NP	-	20.37
	6/26/2012	15.38	NP	-	19.95
	9/24/2012	16.34	NP	-	18.99
<b>B-26</b>	12/17/2012	15.38	NP	-	19.95
	3/25/2013	15.67	NP	-	19.66
	6/17/2013	15.80	NP	-	19.53
	9/9/2013	16.40	NP	-	18.93
	12/4/2013	16.33	NP	-	19.00
	3/3/2014	15.70	NP	-	19.63
	6/18/2014	15.60	NP	-	19.73
	8/26/2014	16.20	NP	-	19.13
	12/8/2014	15.91	NP	-	19.42
	3/3/2015	15.45	NP	-	19.88
	<b>6/9/2015</b>	<b>16.01</b>	<b>NP</b>	-	<b>19.32</b>
	<b>8/19/2015</b>	<b>21.21</b>	<b>NP</b>	-	<b>14.12</b>
<b>B-28</b>	2/14/2000	15.45	NP	-	19.81
(35.26)	5/22/2000	14.34	NP	-	20.92
	8/22/2000	16.11	NP	-	19.15
	11/27/2000	16.36	NP	-	18.90
	2/20/2001	16.14	NP	-	19.12
	5/15/2001	16.07	NP	-	19.19
	9/19/2001	16.25	NP	-	19.01
	12/22/2001	15.97	NP	-	19.29
	3/15/2002	15.36	NP	-	19.90
	9/23/2002	16.36	NP	-	18.90
	12/19/2002	16.35	NP	-	18.91
	3/19/2003	15.69	NP	-	19.57
	6/24/2003	15.93	NP	-	19.33
	9/24/2003	16.31	NP	-	18.95

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	12/26/2003	16.39	NP	-	18.87
	3/30/2004	15.56	NP	-	19.70
	6/24/2004	16.13	NP	-	19.13
	9/27/2004	16.21	NP	-	19.05
	12/14/2004	16.07	NP	-	19.19
	3/7/2005	16.06	NP	-	19.20
	9/19/2005	16.18	NP	-	19.08
	12/12/2005	15.96	NP	-	19.30
	3/13/2006	14.71	NP	-	20.55
	6/26/2006	14.60	NP	-	20.66
	9/25/2006	16.06	16.06	sheen	19.20
	12/11/2006	-	-	-	-
	3/19/2007	-	-	-	-
(35.28)	6/18/2007	-	-	-	-
	9/17/2007	16.37	NP	-	18.91
	12/17/2007	15.93	NP	-	19.35
	1/22/2008	15.15	NP	-	20.13
	3/24/2008	15.30	NP	-	19.98
	6/23/2008	15.83	NP	-	19.45
	9/22/2008	16.14	NP	-	19.14
	1/5/2009	15.82	NP	-	19.46
	3/16/2009	15.90	NP	-	19.38
	6/15/2009	15.91	NP	-	19.37
	9/14/2009	16.20	NP	-	19.08
	12/21/2009	NM	NM	-	NM
	3/16/2010	15.58	NP	-	19.70
B-28	6/21/2010	15.40	NP	-	19.88
	9/20/2010	16.12	NP	-	19.16
	12/14/2010	Inaccessible (work zone)			
	3/21/2011	14.54	NP	-	20.74
	6/8/2011	14.99	NP	-	20.29
	9/26/2011	16.22	NP	-	19.06
	12/12/2011	16.07	NP	-	19.21
	3/26/2012	15.04	NP	-	20.24
	6/26/2012	15.26	NP	-	20.02
	9/24/2012	Inaccessible			
	12/17/2012	15.41	NP	-	19.87
	3/25/2013	15.59	NP	-	19.69
	6/17/2013	15.71	NP	-	19.57
	9/9/2013	16.07	NP	-	19.21
	12/4/2013	16.09	NP	-	19.19
	3/3/2014	NM	NM	NM	NM
	6/18/2014	15.50	NP	-	19.78
	8/26/2014	15.93	NP	-	19.35
	12/8/2014	15.70	NP	-	19.58
	3/3/2015	15.39	NP	-	19.89
	6/9/2015	15.95	NP	-	19.33
	8/19/2015	16.12	NP	-	19.16
B-29	2/14/2000	15.12	NP	-	22.58
(37.70)	5/22/2000	15.43	NP	-	22.27
	8/22/2000	16.24	NP	-	21.46
	11/27/2000	16.63	NP	-	21.07
	2/20/2001	16.27	NP	-	21.43
	5/15/2001	16.22	NP	-	21.48

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	9/19/2001	16.80	NP	-	20.90
	12/22/2001	15.68	NP	-	22.02
	3/15/2002	14.98	NP	-	22.72
	9/23/2002	16.73	NP	-	20.97
	12/19/2002	16.82	NP	-	20.88
	3/19/2003	15.28	NP	-	22.42
	6/24/2003	15.60	NP	-	22.10
	9/24/2003	16.59	NP	-	21.11
	12/26/2003	15.11	NP	-	22.59
	3/30/2004	15.24	NP	-	22.46
	6/24/2004	16.28	NP	-	21.42
	9/27/2004	16.92	NP	-	20.78
	12/14/2004	16.58	NP	-	21.12
	3/7/2005	16.33	NP	-	21.37
	9/19/2005	16.84	NP	-	20.86
	12/12/2005	16.45	NP	-	21.25
	3/13/2006	15.00	NP	-	22.70
	6/26/2006	15.77	NP	-	21.93
	9/25/2006	16.54	NP	-	21.16
	12/11/2006	15.74	15.74	sheen	21.96
	3/19/2007	14.95	NP	-	22.75
(36.00)	6/18/2007	15.97	NP	-	20.03
	9/17/2007	16.82	NP	-	19.18
	12/17/2007	15.89	NP	-	20.11
	1/22/2008	14.77	NP	-	21.23
<b>B-29</b>	3/24/2008	14.96	NP	-	21.04
	6/23/2008	15.54	NP	-	20.46
	9/22/2008	16.44	NP	-	19.56
	1/5/2009	14.74	NP	-	21.26
	3/16/2009	15.78	NP	-	20.22
	6/15/2009	15.87	NP	-	20.13
	9/14/2009	16.53	NP	-	19.47
	12/21/2009	16.15	NP	-	19.85
	3/16/2010	15.31	NP	-	20.69
	6/21/2010	15.02	NP	-	20.98
	9/20/2010	16.02	NP	-	19.98
	12/14/2010	Inaccessible (work zone)			
	3/21/2011	14.09	NP	-	21.91
	6/8/2011	15.49	NP	-	20.51
	9/26/2011	15.99	NP	-	20.01
	12/12/2011	15.81	NP	-	20.19
	3/26/2012	14.61	NP	-	21.39
	6/26/2012	14.93	NP	-	21.07
	9/24/2012	16.21	NP	-	19.79
	12/17/2012	15.14	NP	-	20.86
	3/25/2013	15.46	NP	-	20.54
	6/17/2013	15.59	NP	-	20.41
	9/9/2013	16.30	NP	-	19.70
	12/4/2013	16.21	NP	-	19.79
	3/3/2014	NM	NM	NM	NM
	6/18/2014	15.28	NP	-	20.72
	8/26/2014	15.95	NP	-	20.05
	12/8/2014	15.35	NP	-	20.65
	3/3/2015	14.91	NP	-	21.09
	<b>6/9/2015</b>	<b>15.58</b>	<b>NP</b>	<b>-</b>	<b>20.42</b>

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	<b>8/19/2015</b>	<b>15.88</b>	<b>NP</b>	-	<b>20.12</b>
<b>B-30</b>	2/14/2000	14.76	NP	-	20.63
(35.39)	5/22/2000	15.85	NP	-	19.54
	8/22/2000	16.08	NP	-	19.31
	11/27/2000	16.37	NP	-	19.02
	2/20/2001	15.92	NP	-	19.47
	5/15/2001	15.95	NP	-	19.44
	9/19/2001	16.52	NP	-	18.87
	12/22/2001	14.96	NP	-	20.43
	3/15/2002	14.96	NP	-	20.43
	9/23/2002	16.19	NP	-	19.20
	12/19/2002	16.31	NP	-	19.08
	3/19/2003	14.67	NP	-	20.72
	6/24/2003	15.05	NP	-	20.34
	9/24/2003	16.13	NP	-	19.26
	12/26/2003	15.56	NP	-	19.83
	3/30/2004	14.70	NP	-	20.69
	6/24/2004	15.60	NP	-	19.79
	9/27/2004	16.31	NP	-	19.08
	12/14/2004	16.14	16.11	0.03	19.27
	3/7/2005	15.77	15.77	Sheen	19.62
	6/22/2005	15.39	NP	-	20.00
<b>B-30</b>	9/19/2005	16.20	NP	-	19.19
	12/12/2005	15.43	15.43	Sheen	19.96
	3/13/2006	14.12	14.12	Sheen	21.27
	6/26/2006	15.08	NP	-	20.31
	9/25/2006	16.07	NP	-	19.32
	12/11/2006	14.96	NP	-	20.43
	3/19/2007	14.30	NP	-	21.09
	6/18/2007	15.34	NP	-	20.05
	9/17/2007	16.68	NP	-	18.71
	12/17/2007	15.69	NP	-	19.70
	1/22/2008	15.60	15.58	0.02	19.81
	3/24/2008	14.84	14.83	0.01	20.56
	6/23/2008	15.50	15.49	0.01	19.90
	9/22/2008	16.38	16.37	0.01	19.02
	1/5/2009	15.19	15.18	0.01	20.21
	3/16/2009	15.50	15.48	0.02	19.91
	6/15/2009	15.58	15.55	0.03	19.83
	9/14/2009	16.34	16.33	0.01	19.06
	12/21/2009	15.79	15.78	0.01	19.61
	3/16/2010	14.97	14.96	0.01	20.43
	6/21/2010	14.72	NP	-	20.67
	9/20/2010	15.89	NP	-	19.50
	12/14/2010	Inaccessible (work zone)			
	3/21/2011	13.83	NP	-	21.56
	6/8/2011	14.40	NP	-	20.99
	9/26/2011	15.92	NP	-	19.47
	12/12/2011	15.64	NP	-	19.75
	3/26/2012	14.04	NP	-	21.35
	6/26/2012	14.73	NP	-	20.66
	9/24/2012	15.86	NP	-	19.53
	12/17/2012	14.30	NP	-	21.09
	3/25/2013	13.12	NP	-	22.27

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	6/17/2013	15.16	NP	-	20.23
	9/9/2013	15.82	NP	-	19.57
	12/4/2013	15.82	NP	-	19.57
	3/3/2014	NM	NM	NM	NM
	6/18/2014	14.94	NP	-	20.45
	8/26/2014	15.63	NP	-	19.76
	12/8/2014	15.35	NP	-	20.04
	3/3/2015	14.79	NP	-	20.60
	<b>6/9/2015</b>	<b>15.44</b>	<b>NP</b>	-	<b>19.95</b>
	<b>8/19/2015</b>	<b>16.10</b>	<b>NP</b>	-	<b>19.29</b>
<b>B-32</b>	2/14/2000	16.37	NP	-	17.86
(34.23)	5/22/2000	26.84	NP	-	7.39
	8/22/2000	17.65	NP	-	16.58
	11/27/2000	17.93	NP	-	16.30
	2/20/2001	17.71	NP	-	16.52
	5/15/2001	17.74	NP	-	16.49
	9/19/2001	18.17	NP	-	16.06
	12/20/2001	16.74	NP	-	17.49
	3/15/2002	16.55	NP	-	17.68
	9/23/2002	18.32	18.32	Sheen	15.91
<b>B-32</b>	12/19/2002	18.15	NP	-	16.08
	3/19/2003	16.83	NP	-	17.40
	6/24/2003	17.09	NP	-	17.14
	9/24/2003	17.99	NP	-	16.24
	12/26/2003	17.20	NP	-	17.03
	3/30/2004	16.78	NP	-	17.45
	6/24/2004	17.41	NP	-	16.82
	9/27/2004	18.01	NP	-	16.22
	12/14/2004	17.89	NP	-	16.34
	3/7/2005	17.65	NP	-	16.58
	6/23/2005	17.39	NP	-	16.84
	9/19/2005	18.00	NP	-	16.23
	12/12/2005	17.13	NP	-	17.10
	1/30/2006	15.81	NP	-	18.42
	3/13/2006	15.98	NP	-	18.25
	6/26/2006	15.81	NP	-	18.42
	9/25/2006	16.71	NP	-	17.52
	12/11/2006	15.66	NP	-	18.57
	3/19/2007	15.82	NP	-	18.41
(34.20)	6/18/2007	16.50	NP	-	17.70
	9/17/2007	16.50	NP	-	17.70
	Abandoned				
<b>B-33</b>	2/14/2000	15.54	15.49	0.05	20.40
(35.90)	5/22/2000	16.41	NP	-	19.49
	8/22/2000	17.15	NP	-	18.75
	11/27/2000	17.39	NP	-	18.51
	2/20/2001	17.25	NP	-	18.65
	5/15/2001	17.24	NP	-	18.66
	9/19/2001	17.72	NP	-	18.18
	12/20/2001	16.29	NP	-	19.61
	3/15/2002	15.93	NP	-	19.97
	9/23/2002	17.51	NP	-	18.39
	12/19/2002	17.52	NP	-	18.38
	3/19/2003	16.21	NP	-	19.69

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	6/24/2003	16.57	NP	-	19.33
	9/24/2003	17.45	NP	-	18.45
	12/26/2003	16.74	NP	-	19.16
	3/30/2004	16.24	NP	-	19.66
	6/24/2004	16.87	NP	-	19.03
	9/27/2004	17.56	NP	-	18.34
	12/14/2004	17.22	NP	-	18.68
	3/7/2005	17.10	NP	-	18.80
	6/22/2005	16.88	NP	-	19.02
	9/19/2005	17.40	NP	-	18.50
	12/12/2005	16.70	NP	-	19.20
	1/30/2006	15.01	NP	-	20.89
	3/13/2006	15.80	NP	-	20.10
	6/26/2006	16.44	NP	-	19.46
	12/11/2006	15.76	NP	-	20.14
	3/19/2007	15.34	NP	-	20.56
(34.34)	6/18/2007	16.21	NP	-	18.13
	9/17/2007	16.82	NP	-	17.52
<b>B-33</b>	12/17/2007	15.95	NP	-	18.39
	1/22/2008	15.35	NP	-	18.99
	3/24/2008	15.31	NP	-	19.03
	6/23/2008	15.91	NP	-	18.43
	9/22/2008	16.54	NP	-	17.80
	1/5/2009	15.49	NP	-	18.85
	3/16/2009	15.96	NP	-	18.38
	6/15/2009	15.93	NP	-	18.41
	9/14/2009	16.48	NP	-	17.86
	12/21/2009	15.85	NP	-	18.49
	3/16/2010	16.41	NP	-	17.93
	6/21/2010	16.30	NP	-	18.04
	9/20/2010	16.07	NP	-	18.27
	12/14/2010	15.03	NP	-	19.31
	3/21/2011	14.63	NP	-	19.71
	6/8/2011	14.35	NP	-	19.99
	9/26/2011	16.08	NP	-	18.26
	12/12/2011	15.78	NP	-	18.56
Abandoned					
<b>CR-1</b>	2/14/2000	2.38	NP	-	19.70
(22.08)	5/22/2000	3.26	NP	-	18.82
	8/22/2000	4.32	NP	-	17.76
	11/27/2000	4.38	NP	-	17.70
	2/20/2001	6.50	NP	-	15.58
	5/15/2001	4.25	NP	-	17.83
	9/19/2001	4.79	NP	-	17.29
	12/22/2001	3.05	NP	-	19.03
	3/15/2002	2.77	NP	-	19.31
	9/23/2002	4.34	NP	-	17.74
	12/19/2002	3.84	NP	-	18.24
	3/19/2003	2.85	NP	-	19.23
	6/24/2003	3.38	NP	-	18.70
	9/24/2003	4.33	NP	-	17.75
	12/26/2003	3.32	NP	-	18.76
	3/30/2004	3.14	NP	-	18.94
	6/24/2004	3.68	NP	-	18.40

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	9/27/2004	4.39	NP	-	17.69
	12/14/2004	3.74	NP	-	18.34
	3/7/2005	3.93	NP	-	18.15
	6/23/2005	3.75	NP	-	18.33
	9/19/2005	4.44	NP	-	17.64
	12/12/2005	3.45	NP	-	18.63
	1/30/2006	1.50	NP	-	20.58
	3/13/2006	2.32	NP	-	19.76
	6/26/2006	3.28	NP	-	18.80
	9/25/2006	4.25	NP	-	17.83
	12/11/2006	-	-	-	-
	3/19/2007	2.71	NP	-	19.37
(21.69)	6/18/2007	3.50	NP	-	18.19
	9/17/2007	4.21	NP	-	17.48
	12/17/2007	3.13	NP	-	18.56
	3/24/2008	2.56	NP	-	19.13
<b>CR-1</b>	6/23/2008	3.10	NP	-	18.59
	9/22/2008	3.93	NP	-	17.76
	1/5/2009	2.29	NP	-	19.40
	3/16/2009	2.80	NP	-	18.89
	6/15/2009	3.25	NP	-	18.44
	9/14/2009	3.98	NP	-	17.71
	12/21/2009	3.20	NP	-	18.49
	3/16/2010	2.64	NP	-	19.05
	6/21/2010	2.51	NP	-	19.18
	9/20/2010	3.31	NP	-	18.38
	12/14/2010	1.87	NP	-	19.82
	3/21/2011	1.67	NP	-	20.02
	6/8/2011	1.43	NP	-	20.26
	9/26/2011	3.59	NP	-	18.10
	12/12/2011	3.21	NP	-	18.48
	3/26/2012	1.97	NP	-	19.72
	6/26/2012	2.51	NP	-	19.18
	9/24/2012	3.56	NP	-	18.13
	12/17/2012	0.93	NP	-	20.76
	3/25/2013	2.80	NP	-	18.89
	6/17/2013	3.01	NP	-	18.68
	9/9/2013	3.48	NP	-	18.21
	12/4/2013	3.23	NP	-	18.46
	3/3/2014	2.43	NP	-	19.26
	6/18/2014	2.87	NP	-	18.82
	8/26/2014	3.46	NP	-	18.23
	12/8/2014	2.72	NP	-	18.97
	3/3/2015	2.68	NP	-	19.01
	<b>6/9/2015</b>	<b>3.22</b>	<b>NP</b>	-	<b>18.47</b>
	<b>8/19/2015</b>	<b>3.78</b>	<b>NP</b>	-	<b>17.91</b>
<b>CR-3</b>	2/14/2000	12.29	12.28	0.01	22.04
(34.32)	5/22/2000	16.57	NP	-	17.75
	8/22/2000	15.34	NP	-	18.98
	11/27/2000	13.86	NP	-	20.46
	2/20/2001	15.46	NP	-	18.86
	5/15/2001	15.37	NP	-	18.95
	9/19/2001	16.03	NP	-	18.29
	12/22/2001	14.50	NP	-	19.82

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	3/15/2002	13.93	NP	-	20.39
	9/23/2002	15.70	NP	-	18.62
	12/19/2002	15.40	NP	-	18.92
	3/19/2003	14.27	NP	-	20.05
	6/24/2003	14.70	NP	-	19.62
	9/24/2003	15.67	NP	-	18.65
	12/26/2003	14.71	NP	-	19.61
	3/30/2004	14.28	NP	-	20.04
	6/24/2004	15.17	NP	-	19.15
	9/27/2004	15.85	NP	-	18.47
	12/14/2004	14.97	NP	-	19.35
	3/7/2005	15.32	NP	-	19.00
	6/22/2005	15.01	NP	-	19.31
	9/19/2005	15.70	NP	-	18.62
	12/12/2005	14.97	NP	-	19.35
<b>CR-3</b>	1/30/2006	10.34	NP	-	23.98
	3/13/2006	13.73	NP	-	20.59
	6/26/2006	14.68	NP	-	19.64
	9/25/2006	15.58	NP	-	18.74
	12/11/2006	14.53	NP	-	19.79
	3/19/2007	13.93	NP	-	20.39
(34.31)	6/18/2007	14.94	NP	-	19.37
	9/17/2007	15.75	NP	-	18.56
	12/17/2007	14.76	NP	-	19.55
	1/22/2008	13.81	NP	-	20.50
	3/24/2008	14.02	NP	-	20.29
	6/23/2008	14.66	NP	-	19.65
	9/22/2008	15.51	NP	-	18.80
	1/5/2009	14.24	NP	-	20.07
	3/16/2009	14.70	NP	-	19.61
	6/15/2009	14.78	NP	-	19.53
	9/14/2009	15.50	NP	-	18.81
	12/21/2009	NM	NM	-	NM
	3/16/2010	14.15	NP	-	20.16
	6/21/2010	13.96	NP	-	20.35
	9/20/2010	15.10	NP	-	19.21
	12/14/2010	12.82	NP	-	21.49
	3/21/2011	13.01	NP	-	21.30
	6/8/2011	13.58	NP	-	20.73
	9/26/2011	15.04	NP	-	19.27
	12/12/2011	14.78	NP	-	19.53
	3/26/2012	13.51	NP	-	20.80
	6/26/2012	13.96	NP	-	20.35
	9/24/2012	14.99	NP	-	19.32
	12/17/2012	12.10	NP	-	22.21
	3/25/2013	14.31	NP	-	20.00
	6/17/2013	14.42	NP	-	19.89
	9/9/2013	15.05	NP	-	19.26
	12/4/2013	14.97	NP	-	19.34
<b>CR-3</b>	3/3/2014	14.34	NP	-	19.97
	6/18/2014	14.20	NP	-	20.11
	8/26/2014	14.83	NP	-	19.48
	12/8/2014	14.53	NP	-	19.78
	3/3/2015	14.02	NP	-	20.29

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	<b>6/9/2015</b>	<b>14.64</b>	<b>NP</b>	-	<b>19.67</b>
	<b>8/19/2015</b>	<b>15.24</b>	<b>NP</b>	-	<b>19.07</b>
<b>CR-4</b>	2/14/2000	5.08	NP	-	32.06
(37.14)	5/22/2000	5.63	NP	-	31.51
	8/22/2000	7.25	NP	-	29.89
	11/27/2000	8.31	NP	-	28.83
	2/20/2001	6.98	NP	-	30.16
	5/15/2001	6.34	NP	-	30.80
	9/19/2001	8.55	NP	-	28.59
	12/20/2001	5.38	NP	-	31.76
	3/15/2002	4.88	NP	-	32.26
	6/4/2002	6.17	NP	-	30.97
	9/23/2002	7.69	NP	-	29.45
	12/19/2002	7.92	NP	-	29.22
	3/19/2003	4.97	NP	-	32.17
	6/24/2003	5.98	NP	-	31.16
	9/24/2003	7.77	NP	-	29.37
	12/26/2003	4.73	NP	-	32.41
	3/30/2004	4.58	NP	-	32.56
	6/24/2004	6.68	NP	-	30.46
	9/27/2004	7.32	NP	-	29.82
	12/14/2004	6.41	NP	-	30.73
	3/7/2005	6.82	NP	-	30.32
	6/22/2005	6.43	NP	-	30.71
	9/19/2005	7.35	NP	-	29.79
	12/12/2005	2.65	NP	-	34.49
	3/13/2006	NM	NM	NM	NM
	6/26/2006	6.20	NM	NM	NM
	9/25/2006	8.63	NP	-	28.51
	12/11/2006	-	-	-	-
	3/19/2007	5.25	NP	-	31.89
	6/18/2007	6.67	NP	-	30.47
	9/17/2007	8.78	NP	-	28.36
	12/17/2007	9.69	NP	-	27.45
	3/24/2008	-----Well Compromised-----			
	6/23/2008	NM	NM	NM	NM
	9/22/2008	NM	NM	NM	NM
	1/5/2009	NM	NM	NM	NM
	3/16/2009	NM	NM	NM	NM
	6/15/2009	NM	NM	NM	NM
	9/14/2009	NM	NM	NM	NM
	12/21/2009	NM	NM	NM	NM
	3/16/2010	NM	NM	NM	NM
	6/21/2010	NM	NM	NM	NM
	9/20/2010	NM	NM	NM	NM
	12/14/2010	-----Well Destroyed-----			
<b>CR-4A</b>	6/8/2011	5.43	NP	-	29.57
(35.00)	9/26/2011	7.29	NP	-	27.71
	12/12/2011	5.35	NP	-	29.65
	3/26/2012	2.50	NP	-	32.50
	6/26/2012	3.02	NP	-	31.98
	9/24/2012	4.99	NP	-	30.01
	12/17/2012	2.00	NP	-	33.00
	3/25/2013	3.27	NP	-	31.73

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	6/17/2013	3.22	NP	-	31.78
	9/9/2013	4.01	NP	-	30.99
	12/4/2013	4.05	NP	-	30.95
	3/3/2014	3.14	NP	-	31.86
	6/18/2014	3.56	NP	-	31.44
	8/26/2014	4.61	4.56	0.05	30.43
	12/8/2014	3.55	3.44	0.11	31.54
	3/3/2015	3.19	NP	-	31.81
(37.14)	<b>6/9/2015</b>	<b>4.05</b>	<b>NP</b>	<b>-</b>	<b>33.09</b>
	<b>8/19/2015</b>	<b>5.57</b>	<b>5.36</b>	<b>0.21</b>	<b>31.57</b>
<b>CR-6</b>	2/14/2000	11.75	NP	-	23.86
(35.61)	5/22/2000	12.20	NP	-	23.41
	8/22/2000	13.11	NP	-	22.50
	11/27/2000	NM	NM	NM	NM
	2/20/2001	13.12	13.11	0.01	22.50
	5/15/2001	12.90	NP	-	22.71
	9/19/2001	13.95	13.91	0.04	21.69
	12/20/2001	13.02	NP	-	22.59
	3/15/2002	11.54	NP	-	24.07
	6/4/2002	12.70	12.69	0.01	22.92
	9/23/2002	14.56	NP	-	21.05
	12/19/2002	13.26	13.23	0.03	22.37
	3/19/2003	12.01	11.99	0.02	23.62
	6/24/2003	12.75	12.73	0.02	22.88
	9/24/2003	13.43	13.40	0.03	22.20
	12/26/2003	12.73	12.69	0.04	22.91
	3/30/2004	12.18	12.18	sheen	23.43
	6/24/2004	13.21	13.17	0.04	22.43
	9/27/2004	13.24	13.19	0.05	22.41
	12/14/2004	13.01	12.97	0.04	22.63
	3/7/2005	13.07	13.04	0.03	22.56
	6/21/2005	13.16	13.13	0.03	22.47
	9/19/2005	13.63	13.60	0.03	22.00
	12/12/2005	12.47	12.47	sheen	23.14
	3/13/2006	11.61	NP	-	24.00
	6/26/2006	12.48	12.48	sheen	23.13
	9/25/2006	13.68	13.68	sheen	21.93
	12/11/2006	12.39	12.37	0.02	23.24
	3/19/2007	11.67	11.61	0.06	23.99
	6/18/2007	12.88	12.84	0.04	22.76
	9/17/2007	13.86	13.86	sheen	21.75
	12/17/2007	12.43	NP	-	23.18
	3/24/2008	11.70	NP	-	23.91
	6/23/2008	12.44	12.43	0.01	23.18
<b>CR-6</b>	9/22/2008	13.54	13.50	0.04	22.10
	1/5/2009	11.79	11.72	0.07	23.88
	3/16/2009	12.25	12.20	0.05	23.40
	6/15/2009	12.35	12.30	0.05	23.30
	9/14/2009	13.35	13.31	0.04	22.29
	12/21/2009	12.13	12.10	0.03	23.50
	3/16/2010	10.02	NP	-	25.59
	6/21/2010	11.17	11.16	0.01	24.45
	9/20/2010	13.01	12.98	0.03	22.62
	12/14/2010	11.38	11.36	0.02	24.25

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	3/21/2011	10.45	NP	-	25.16
	6/8/2011	11.36	11.36	sheen	24.25
	9/26/2011	12.87	NP	-	22.74
	12/12/2011	12.26	NP	-	23.35
	3/26/2012	11.08	NP	-	24.53
	6/26/2012	11.66	NP	-	23.95
	9/24/2012	12.96	NP	-	22.65
	12/17/2012	11.49	NP	-	24.12
	3/25/2013	11.84	NP	-	23.77
	6/17/2013	11.80	NP	-	23.81
	9/9/2013	12.83	NP	-	22.78
	12/4/2013	12.63	NP	-	22.98
	3/3/2014	NM	NM	NM	NM
	6/18/2014	11.94	NP	-	23.67
(35.51)	8/26/2014	12.26	NP	-	23.35
	12/8/2014	11.76	NP	-	23.85
	3/3/2015	11.51	NP	-	24.10
(35.61)	<b>6/9/2015</b>	<b>12.20</b>	<b>NP</b>	-	<b>23.41</b>
	<b>8/19/2015</b>	<b>12.83</b>	<b>NP</b>	-	<b>22.78</b>
<b>CR-7</b>	2/14/2000	9.46	9.45	0.01	26.12
(35.57)	5/22/2000	10.09	NP	-	25.48
	8/22/2000	16.34	NP	-	19.23
	11/27/2000	NM	NM	NM	NM
	2/20/2001	11.30	11.30	sheen	24.27
	5/15/2001	11.21	NP	-	24.36
	9/19/2001	12.46	NP	-	23.11
	12/20/2001	9.92	NP	-	25.65
	3/15/2002	9.60	NP	-	25.97
	6/4/2002	11.01	11.00	0.01	24.57
	9/23/2002	12.23	NP	-	23.34
	12/19/2002	11.45	NP	-	24.12
	3/19/2003	10.53	NP	-	25.04
	6/24/2003	11.23	NP	-	24.34
	9/24/2003	12.60	12.58	0.02	22.99
	12/26/2003	10.90	NP	-	24.67
	3/30/2004	10.77	NP	-	24.80
	6/24/2004	11.78	11.75	0.03	23.81
	9/27/2004	11.58	NP	-	23.99
	12/14/2004	11.14	NP	-	24.43
	3/7/2005	11.57	11.56	0.01	24.01
	6/21/2005	11.27	11.25	0.02	24.32
	9/19/2005	12.39	12.38	0.01	23.19
<b>CR-7</b>	12/12/2005	10.90	10.90	sheen	24.67
	3/13/2006	9.94	NP	-	25.63
	6/26/2006	11.14	11.14	sheen	24.43
	9/25/2006	12.42	12.40	0.02	23.17
	12/11/2006	10.74	10.74	sheen	24.83
	3/19/2007	-	-	-	-
	6/18/2007	11.40	11.40	sheen	24.17
	9/17/2007	12.59	12.59	sheen	22.98
	12/17/2007	Inaccessible			
	3/24/2008	10.00	10.00	sheen	25.57
	6/23/2008	10.80	NP	-	24.77
	9/22/2008	12.19	12.18	0.01	23.39

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	1/5/2009	9.79	NP	-	25.78
	3/16/2009	10.77	NP	-	24.80
	6/15/2009	10.79	NP	-	24.78
	9/14/2009	11.89	NP	-	23.68
	12/21/2009	NM	NM	NM	NM
	3/16/2010	11.78	11.76	0.02	23.81
	6/21/2010	9.45	NP	-	26.12
	9/20/2010	11.50	NP	-	24.07
	12/14/2010	9.26	NP	-	26.31
	3/21/2011	8.78	NP	-	26.79
	6/8/2011		Inaccessible		
	9/26/2011		Inaccessible		
	12/12/2011	10.73	NP	-	24.84
	3/26/2012	9.11	NP	-	26.46
	6/26/2012	9.92	NP	-	25.65
	9/24/2012	11.47	NP	-	24.10
	12/17/2012	9.53	NP	-	26.04
	3/25/2013	10.10	NP	-	25.47
	6/17/2013	10.09	NP	-	25.48
	9/9/2013	11.24	NP	-	24.33
	12/4/2013	10.79	NP	-	24.78
	3/3/2014	NM	NM	NM	NM
	6/18/2014	10.29	NP	-	25.28
	8/26/2014	11.04	NP	-	24.53
	12/8/2014	10.02	NP	-	25.55
	3/3/2015	9.91	NP	-	25.66
	<b>6/9/2015</b>	<b>10.75</b>	<b>NP</b>	-	<b>24.82</b>
	<b>8/19/2015</b>	<b>11.55</b>	<b>NP</b>	-	<b>24.02</b>
<b>CR-8</b>	2/14/2000	5.70	NP	-	27.44
(33.14)	5/22/2000	6.23	NP	-	26.91
	8/22/2000	7.44	NP	-	25.70
	11/27/2000	7.61	NP	-	25.53
	2/20/2001	7.03	NP	-	26.11
	5/15/2001	6.98	NP	-	26.16
	9/19/2001	8.29	NP	-	24.85
	12/20/2001	6.18	NP	-	26.96
	3/15/2002	5.77	NP	-	27.37
	6/4/2002	6.82	NP	-	26.32
	9/23/2002	8.04	NP	-	25.10
	12/19/2002	7.36	NP	-	25.78
<b>CR-8</b>	3/19/2003	6.12	NP	-	27.02
	6/24/2003	6.84	NP	-	26.30
	9/24/2003	8.24	NP	-	24.90
	12/26/2003	6.99	NP	-	26.15
	3/30/2004	6.31	NP	-	26.83
	6/24/2004	7.19	NP	-	25.95
	9/27/2004	7.42	NP	-	25.72
	12/14/2004	6.80	NP	-	26.34
	3/7/2005	6.86	NP	-	26.28
	6/22/2005	6.71	NP	-	26.43
	9/19/2005	8.03	NP	-	25.11
	12/12/2005	6.96	NP	-	26.18
	3/13/2006	5.33	NP	-	27.81
	6/26/2006	6.78	NP	-	26.36
	9/25/2006	8.06	NP	-	25.08

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	12/11/2006	6.25	NP	-	26.89
	3/19/2007	5.90	NP	-	27.24
	6/18/2007	7.15	NP	-	25.99
	9/17/2007	8.23	NP	-	24.91
	12/17/2007	7.32	NP	-	25.82
	3/24/2008	6.63	6.63	sheen	26.51
	6/23/2008	7.12	NP	-	26.02
	9/22/2008	8.81	NP	-	24.33
	1/5/2009	6.62	NP	-	26.52
	3/16/2009	5.80	NP	-	27.34
	6/15/2009	6.69	NP	-	26.45
	9/14/2009	7.85	NP	-	25.29
	12/21/2009	5.98	NP	-	27.16
	3/16/2010	6.11	NP	-	27.03
	6/21/2010	7.07	NP	-	26.07
	9/20/2010	7.50	NP	-	25.64
	12/15/2010	6.80	NP	-	26.34
	3/21/2011	4.94	NP	-	28.20
	6/8/2011	NM	NM	-	NM
	9/26/2011	7.46	NP	-	25.68
	12/12/2011	6.32	NP	-	26.82
	3/26/2012	6.41	NP	-	26.73
	6/26/2012	6.07	NP	-	27.07
	9/24/2012	7.26	NP	-	25.88
	12/17/2012	6.62	NP	-	26.52
	3/25/2013	5.8	NP	-	27.34
	6/17/2013	8.88	NP	-	24.26
	9/9/2013	7.02	NP	-	26.12
	12/4/2013	7.16	NP	-	25.98
	3/3/2014	5.61	NP	-	27.53
	6/18/2014	5.89	NP	-	27.25
	8/26/2014	6.86	NP	-	26.28
	12/8/2014	6.50	NP	-	26.64
	3/3/2015	5.51	NP	-	27.63
	<b>6/9/2015</b>	<b>6.35</b>	<b>NP</b>	-	<b>26.79</b>
	<b>8/19/2015</b>	<b>7.30</b>	<b>NP</b>	-	<b>25.84</b>
<b>CR-8A</b> <b>(Sump)</b>	6/26/2006	6.52	NP	-	-
	9/25/2006	7.12	NP	-	-
	12/11/2006	4.53	NP	-	-
	3/19/2007	4.62	NP	-	-
	6/18/2007	6.07	NP	-	-
	9/17/2007	7.38	NP	-	-
	12/17/2007	5.37	NP	-	-
	3/24/2008	4.64	NP	-	-
	6/23/2008	5.92	NP	-	-
	9/22/2008	7.07	7.07	Sheen	-
	1/5/2009	4.40	4.40	Sheen	-
	3/16/2009			Inaccessible	
	6/15/2009	5.94	NP	-	-
	9/14/2009	7.16	NP	-	-
	12/21/2009	4.95	NP	-	-
	3/16/2010	4.96	NP	-	-
	6/21/2010	4.90	NP	-	-
	9/20/2010	5.57	NP	-	-

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	12/15/2010	4.53	NP	-	-
	3/21/2011	4.39	4.39	Sheen	-
	6/8/2011	5.15	NP	-	-
	9/26/2011	NM	NM	NM	NM
	12/12/2011	6.47	NP	-	-
	3/26/2012	4.77	NP	-	-
	6/26/2012	5.52	NP	-	-
	9/24/2012	6.96	NP	-	-
	12/17/2012	4.64	NP	-	-
	3/25/2013	5.19	NP	-	-
	6/17/2013	8.31	NP	-	-
	9/9/2013	6.39	NP	-	-
	12/4/2013	6.04	NP	-	-
	3/3/2014	5.14	NP	-	-
	6/18/2014	5.15	NP	-	-
	8/26/2014	6.76	NP	-	-
	12/8/2014	5.47	NP	-	-
	3/3/2015	5.39	NP	-	-
	<b>6/9/2015</b>	<b>5.76</b>	<b>NP</b>	-	-
	<b>8/19/2015</b>	<b>7.19</b>	<b>NP</b>	-	-
<b>CR-9</b>	2/14/2000	3.02	NP	-	32.70
(35.72)	5/22/2000	3.78	NP	-	31.94
	8/22/2000	6.51	NP	-	29.21
	11/27/2000	5.20	NP	-	30.52
	2/20/2001	4.71	NP	-	31.01
	5/15/2001	4.95	NP	-	30.77
	9/19/2001	7.26	NP	-	28.46
	12/20/2001	3.47	NP	-	32.25
	3/15/2002	3.25	NP	-	32.47
	9/23/2002	7.11	NP	-	28.61
	12/19/2002	4.35	NP	-	31.37
	3/19/2003	3.46	NP	-	32.26
	6/24/2003	5.95	NP	-	29.77
	9/24/2003	6.82	NP	-	28.90
<b>CR-9</b>	12/26/2003	3.53	NP	-	32.19
	3/30/2004	3.69	NP	-	32.03
	6/24/2004	6.06	NP	-	29.66
	9/27/2004	6.32	NP	-	29.40
	2/14/2004	3.81	NP	-	31.91
	3/7/2005	4.66	NP	-	31.06
	6/22/2005	6.71	NP	-	29.01
	9/19/2005	6.94	NP	-	28.78
	12/12/2005	4.01	NP	-	31.71
	3/13/2006	3.12	NP	-	32.60
	6/26/2006	5.33	NP	-	30.39
	9/25/2006	7.00	NP	-	28.72
	12/11/2006	4.13	NP	-	31.59
	3/19/2007	3.40	NP	-	32.32
	6/18/2007	5.88	NP	-	29.84
	9/17/2007	-	-	-	-
	12/17/2007		Inaccessible		
	3/24/2008	4.17	NP	-	31.55
	6/23/2008	5.53	NP	-	30.19
	9/22/2008	6.98	NP	-	28.74

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	1/5/2009	3.10	NP	-	32.62
	3/16/2009	3.78	NP	-	31.94
	6/15/2009	6.02	NP	-	29.70
	9/14/2009	6.98	NP	-	28.74
	12/21/2009	3.76	NP	-	31.96
	3/16/2010	3.43	NP	-	32.29
	6/21/2010	4.80	NP	-	30.92
	9/20/2010	5.65	NP	-	30.07
	12/15/2010	2.62	NP	-	33.10
	3/21/2011	2.77	NP	-	32.95
	6/8/2011	4.74	NP	-	30.98
	9/26/2011	6.78	NP	-	28.94
	12/12/2011	4.66	NP	-	31.06
	3/26/2012	2.82	NP	-	32.90
	6/26/2012	4.45	NP	-	31.27
	9/24/2012	6.65	NP	-	29.07
	12/17/2012	2.94	NP	-	32.78
	3/25/2013	3.43	NP	-	32.29
	6/17/2013	4.32	NP	-	31.40
	9/9/2013	5.65	NP	-	30.07
	12/4/2013	4.09	NP	-	31.63
	3/3/2014	3.25	NP	-	32.47
	6/18/2014	4.78	NP	-	30.94
	8/26/2014	6.20	NP	-	29.52
	12/8/2014	2.91	NP	-	32.81
	3/3/2015	3.88	NP	-	31.84
	<b>6/9/2015</b>	<b>5.38</b>	<b>NP</b>	-	<b>30.34</b>
	<b>8/19/2015</b>	<b>6.16</b>	<b>NP</b>	-	<b>29.56</b>
<b>CR-10</b>	2/14/2000	4.12	4.08	0.04	31.48
(35.57)	5/22/2000	4.95	NP	-	30.62
	8/22/2000	7.00	6.74	0.26	28.78
<b>CR-10</b>	11/27/2000	NM	NM	NM	NM
	2/20/2001	6.27	6.03	0.24	29.49
	5/15/2001	Covered With a Gravel Pile			
	9/19/2001	10.68	7.92	2.76	27.10
	12/22/2001	4.18	4.12	0.06	31.44
	3/15/2002	4.03	3.95	0.08	31.60
	6/4/2002	5.72	5.55	0.17	29.99
	9/23/2002	9.13	7.04	2.09	28.11
	12/19/2002	7.44	6.35	1.09	29.00
	3/19/2003	4.25	4.21	0.04	31.35
	6/24/2003	5.69	5.58	0.11	29.97
	9/24/2003	8.15	7.41	0.74	28.01
	12/26/2003	6.45	4.75	1.70	30.48
	3/30/2004	5.23	NP	-	30.34
	6/24/2004	6.81	6.79	0.02	28.78
	9/27/2004	6.78	NP	-	28.79
	12/14/2004	6.33	6.30	0.03	29.26
	3/7/2005	6.63	6.62	0.01	28.95
	6/21/2005	5.50	5.46	0.04	30.10
	9/19/2005	8.33	7.94	0.39	27.55
	12/12/2005	5.61	5.60	Sheen	29.96
	3/13/2006	4.78	4.78	Sheen	30.79
	6/26/2006	6.90	6.90	Sheen	28.67

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	9/25/2006	8.59	7.74	0.85	27.66
	12/11/2006	4.93	4.93	sheen	30.64
	3/19/2007	4.60	4.55	0.05	31.01
	6/18/2007	6.30	6.26	0.04	29.30
	9/17/2007	8.55	7.80	0.75	27.62
	12/17/2007	5.02	-	-	30.55
	3/24/2008	4.54	4.50	0.04	31.06
	6/23/2008	5.64	5.60	0.04	29.96
	9/22/2008	7.65	7.42	0.23	28.10
	1/5/2009	4.75	4.29	0.46	31.19
	3/16/2009	5.31	5.27	0.04	30.29
	6/15/2009	6.20	6.15	0.05	29.41
	9/14/2009	7.69	7.62	0.07	27.94
	12/21/2009	5.88	5.32	0.56	30.14
	3/16/2010	5.11	5.10	0.01	30.47
	6/21/2010	4.58	4.58	sheen	30.99
	9/20/2010	6.57	6.49	0.08	29.06
	12/15/2010	4.41	4.22	0.19	31.31
	3/21/2011	4.10	NP	-	31.47
	6/8/2011	5.24	5.22	0.02	30.35
	9/26/2011	7.61	7.39	0.22	28.14
	12/12/2011	6.02	5.98	0.04	29.58
	3/26/2012	4.26	4.21	0.05	31.35
	6/26/2012	5.00	4.92	0.08	30.63
	9/24/2012	7.28	7.16	0.12	28.39
	12/17/2012	4.28	4.26	0.02	31.31
	3/25/2013	5.28	5.26	0.02	30.31
<b>CR-10</b>	6/17/2013	5.35	5.32	0.03	30.24
	9/9/2013	6.37	6.27	0.10	29.28
	12/4/2013	5.99	5.94	0.05	29.62
	3/3/2014	4.99	4.98	0.01	30.59
	6/18/2014	5.50	5.45	0.05	30.11
	8/26/2014	6.84	6.83	0.01	28.74
	12/8/2014	5.09	5.08	0.01	30.49
	3/3/2015	5.33	4.94	0.39	30.55
	<b>6/10/2015</b>	<b>6.12</b>	<b>6.09</b>	<b>0.03</b>	<b>29.47</b>
	<b>8/19/2015</b>	Inaccessible			
<b>CR-11</b>	2/14/2000	2.06	NP	-	32.37
(34.43)	5/22/2000	2.04	NP	-	32.39
	8/22/2000	4.13	NP	-	30.30
	11/27/2000	4.47	4.47	Sheen	29.96
	2/20/2001	3.27	NP	-	31.16
	5/15/2001	3.02	NP	-	31.41
	9/19/2001	5.26	NP	-	29.17
	12/20/2001	2.34	NP	-	32.09
	3/15/2002	2.02	NP	-	32.41
	9/23/2002	5.12	NP	-	29.31
	12/19/2002	3.86	3.84	0.02	30.59
	3/19/2003	2.06	NP	-	32.37
	6/24/2003	3.25	NP	-	31.18
	9/24/2003	4.80	NP	-	29.63
	12/26/2003	Well Obstructed			
	3/30/2004	2.53	NP	-	31.90
	6/24/2004	3.85	3.84	0.01	30.59

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	9/27/2004	4.60	4.59	0.01	29.84
	12/14/2004	3.24	3.22	0.02	31.21
	3/7/2005	3.27	NP	-	31.16
	6/20/2005	3.20	NP	-	31.23
	9/19/2005	4.47	4.47	0.00	29.96
	12/12/2005	3.20	3.20	Sheen	31.23
	3/13/2006	1.98	NP	Sheen	32.45
	6/26/2006	2.05	NP	-	32.38
	9/25/2006	2.56	NP	-	31.87
	12/11/2006	2.58	2.56	0.02	31.87
	3/19/2007	2.34	NP	-	32.09
	6/18/2007	2.46	NP	-	31.97
	9/17/2007	3.69	3.64	0.05	30.78
	12/17/2007	1.20	NP	-	33.23
	3/24/2008	0.21	NP	-	34.22
	6/23/2008	2.10	NP	-	32.33
	9/22/2008	4.40	4.30	0.10	30.11
	1/5/2009	3.57	3.57	Sheen	30.86
	3/16/2009	5.45	NP	-	28.98
	6/15/2009		Inaccessible		
	9/14/2009	4.01	NP	-	30.42
	12/21/2009	3.98	NP	-	30.45
	3/16/2010	3.44	NP	-	30.99
	6/21/2010	1.60	1.60	Sheen	32.83
	9/20/2010	2.04	NP	-	32.39
<b>CR-11</b>	12/15/2010	1.95	1.95	Sheen	32.48
	3/21/2011	0.29	NP	-	34.14
	6/8/2011	NM	NM	NM	NM
	9/26/2011		Inaccessible		
	12/12/2011	1.46	1.45	0.01	32.98
	3/26/2012	1.76	NP	-	32.67
	6/26/2012		Inaccessible		
	9/24/2012	3.62			30.81
	12/17/2012		Inaccessible		
	3/25/2013	2.42	NP	-	32.01
	6/17/2013	2.25	NP	-	32.18
	9/9/2013	2.46	NP	-	31.97
	12/4/2013	2.50	NP	-	31.93
	3/3/2014	2.23	NP	-	32.20
	6/18/2014	1.41	NP	-	33.02
	8/26/2014	NM	NM	NM	NM
	12/8/2014	1.68	1.68	-	32.75
	3/3/2015	1.90	NP	-	32.53
	<b>6/9/2015</b>		Inaccessible		
	<b>8/19/2015</b>	<b>2.70</b>	<b>2.70</b>	<b>Sheen</b>	<b>31.73</b>
<b>CR-12</b>	6/9/1999	4.85	NP	-	30.74
(35.59)	7/8/1999	5.08	NP	-	30.51
	8/16/1999	5.63	NP	-	29.96
	9/20/1999	8.90	NP	-	26.69
	2/9/2000	2.66	NP	-	32.93
	5/9/2000	4.44	NP	-	31.15
	5/15/2000	4.12	NP	-	31.47
	7/11/2000	5.21	NP	-	30.38
	8/14/2000	5.76	NP	-	29.83

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	12/12/2000	5.61	NP	-	29.98
	4/3/2001	5.49	NP	-	30.10
	6/8/2001	Covered With a Gravel Pile			
	7/16/2001	Covered With a Gravel Pile			
	8/1/2001	6.14	NP	-	29.45
	9/19/2001	Covered With a Gravel Pile			
	12/22/2001	3.82	NP	-	31.77
	3/15/2002	3.89	NP	-	31.70
	6/4/2002	5.13	NP	-	30.46
	9/23/2002	6.69	NP	-	28.90
	12/19/2002	5.53	NP	-	30.06
	3/19/2003	3.99	NP	-	31.60
	6/24/2003	5.15	NP	-	30.44
	9/24/2003	6.67	NP	-	28.92
	12/26/2003	4.48	NP	-	31.11
	3/30/2004	4.76	NP	-	30.83
	6/24/2004	5.94	NP	-	29.65
	9/27/2004	6.28	NP	-	29.31
	12/14/2004	5.27	NP	-	30.32
	3/7/2005	5.84	NP	-	29.75
	6/21/2005	5.39	NP	-	30.20
	9/19/2005	6.55	NP	-	29.04
	12/12/2005	5.14	NP	-	30.45
<b>CR-12</b>	3/13/2006	4.55	NP	-	31.04
	6/26/2006	5.31	NP	-	30.28
	9/25/2006	6.69	NP	-	28.90
	12/11/2006	4.91	NP	-	30.68
	3/19/2007	4.45	NP	-	31.14
	6/18/2007	5.86	NP	-	29.73
	9/17/2007	6.86	NP	-	28.73
	12/17/2007	4.73	NP	-	30.86
	3/24/2008	4.47	4.46	0.01	26.66
	6/23/2008	5.72	NP	-	29.87
	9/22/2008	Inaccessible			
	1/5/2009	3.98	NP	-	31.61
	3/16/2009	5.29	NP	-	30.30
	6/15/2009	5.55	NP	-	30.04
	9/14/2009	6.64	NP	-	28.95
	12/21/2009	5.00	NP	-	30.59
	3/16/2010	4.60	NP	-	30.99
	6/21/2010	4.65	NP	-	30.94
	9/20/2010	6.06	NP	-	29.53
	12/15/2010	3.65	NP	-	31.94
	3/21/2011	4.05	NP	-	31.54
	6/8/2011	5.00	NP	-	30.59
	9/26/2011	6.71	NP	-	28.88
	12/12/2011	5.88	NP	-	29.71
	3/26/2012	4.40	NP	-	31.19
	6/26/2012	5.27	NP	-	30.32
	9/24/2012	6.59	NP	-	29.00
	12/17/2012	3.66	NP	-	31.93
	3/25/2013	5.24	NP	-	30.35
	6/17/2013	5.25	NP	-	30.34
	9/9/2013	6.1	NP	-	29.49

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	12/4/2013	5.54	NP	-	30.05
	3/3/2014	4.50	NP	-	31.09
	6/18/2014	5.56	NP	-	30.03
	8/26/2014	6.32	NP	-	29.27
	12/8/2014	4.73	NP	-	30.86
	3/3/2015	5.02	NP	-	30.57
	<b>6/9/2015</b>	<b>6.05</b>	<b>NP</b>	-	<b>29.54</b>
	<b>8/19/2015</b>		<b>Inaccessible</b>		
<b>CR-13</b>	6/9/1999	5.08	NP	-	30.38
(35.46)	7/8/1999	5.27	NP	-	30.19
	8/16/1999	5.77	NP	-	29.69
	9/20/1999	9.05	NP	-	26.41
	2/9/2000	3.86	NP	-	31.60
	5/9/2000	4.63	NP	-	30.83
	5/15/2000	4.37	NP	-	31.09
	7/11/2000	5.28	NP	-	30.18
	8/14/2000	5.81	NP	-	29.65
	12/12/2000	5.64	NP	-	29.82
	4/3/2001	5.80	NP	-	29.66
	6/8/2001	5.75	NP	-	29.71
	7/16/2001	6.29	NP	-	29.17
<b>CR-13</b>	8/1/2001	6.52	NP	-	28.94
	9/19/2001		Covered With a Gravel Pile		
	12/22/2001	4.34	NP	-	31.12
	3/15/2002	4.38	NP	-	31.08
	6/4/2002	5.66	NP	-	29.80
	9/23/2002	6.83	NP	-	28.63
	12/19/2002	6.09	NP	-	29.37
	3/19/2003	4.71	NP	-	30.75
	6/24/2003	5.66	NP	-	29.80
	9/24/2003	6.90	NP	-	28.56
	12/26/2003	4.93	NP	-	30.53
	3/30/2004	5.29	NP	-	30.17
	6/24/2004	6.24	NP	-	29.22
	9/27/2004	6.49	NP	-	28.97
	12/14/2004	5.81	NP	-	29.65
	3/7/2005	6.16	NP	-	29.30
	6/21/2005	5.70	NP	-	29.76
	9/19/2005	6.81	NP	-	28.65
	12/12/2005	5.38	NP	-	30.08
	3/13/2006	NM	NM	NM	NM
	6/26/2006	NM	NM	NM	NM
	9/25/2006	-----Well not found-----			
	12/11/2006	-	-	-	-
	3/19/2007	-	-	-	-
	6/18/2007	-	-	-	-
	9/17/2007	-	-	-	-
	12/17/2007	NM	NM	NM	NM
	3/24/2008		Abandoned		
<b>CR-14</b>	6/9/1999	5.03	NP	-	30.40
(35.43)	7/8/1999	5.27	NP	-	30.16
	8/16/1999	5.85	NP	-	29.58
	9/20/1999	6.14	NP	-	29.29
	2/9/2000	3.98	NP	-	31.45

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	5/9/2000	4.66	NP	-	30.77
	5/15/2000	4.33	NP	-	31.10
	7/11/2000	5.41	NP	-	30.02
	8/14/2000	6.01	NP	-	29.42
	12/12/2000	5.87	NP	-	29.56
	4/3/2001	5.70	NP	-	29.73
	6/8/2001	5.81	NP	-	29.62
	7/16/2001	6.20	NP	-	29.23
	8/1/2001	6.32	NP	-	29.11
	9/19/2001	6.99	NP	-	28.44
	12/20/2001	4.22	NP	-	31.21
	3/15/2002	4.09	NP	-	31.34
	6/4/2002	5.41	NP	-	30.02
	9/23/2002	6.86	NP	-	28.57
	12/19/2002	5.59	NP	-	29.84
	3/19/2003	4.54	NP	-	30.89
	6/24/2003	5.51	NP	-	29.92
<b>CR-14</b>	9/24/2003	7.01	NP	-	28.42
	12/26/2003	4.72	NP	-	30.71
	3/30/2004	5.38	NP	-	30.05
	6/24/2004	6.36	NP	-	29.07
	9/27/2004	6.53	NP	-	28.90
	12/14/2004	5.57	NP	-	29.86
	3/7/2005	6.26	NP	-	29.17
	6/21/2005	5.56	NP	-	29.87
	9/19/2005	6.93	NP	-	28.50
	12/12/2005	5.39	NP	-	30.04
	3/13/2006	4.89	NP	-	30.54
	6/26/2006	5.87	NP	-	29.56
	9/25/2006	7.25	NP	-	28.18
	12/11/2006	5.52	NP	-	29.91
	3/19/2007	5.19	NP	-	30.24
	6/18/2007	6.13	NP	-	29.30
	9/17/2007	7.33	NP	-	28.10
	12/17/2007	5.47	NP	-	29.96
	3/24/2008	4.71	NP	-	30.72
	6/23/2008	5.80	NP	-	29.63
	9/22/2008	7.09	NP	-	28.34
	1/5/2009	4.38	NP	-	31.05
	3/16/2009	5.43	NP	-	30.00
	6/15/2009	5.86	NP	-	29.57
	9/14/2009	6.96	NP	-	28.47
	12/21/2009	5.63	NP	-	29.80
	3/16/2010	5.06	NP	-	30.37
	6/21/2010	5.37	NP	-	30.06
	9/20/2010	6.48	NP	-	28.95
	12/15/2010	4.10	NP	-	31.33
	3/21/2011	4.19	NP	-	31.24
	6/8/2011	NM	NM	NM	NM
	9/26/2011			Inaccessible	
	12/12/2011	NM	NM	NM	NM
	3/26/2012	4.59	NP	-	30.84
	6/26/2012	5.40			30.03
	9/24/2012	6.88			28.55

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	12/17/2012	4.05	NP	-	31.38
	3/25/2013	5.57	NP	-	29.86
	6/17/2013	5.47	NP	-	29.96
	9/9/2013	6.39	NP	-	29.04
	12/4/2013	5.83	NP	-	29.60
	3/3/2014	5.00	NP	-	30.43
	6/18/2014	5.77	NP	-	29.66
	8/26/2014	6.52	NP	-	28.91
	12/8/2014	5.01	NP	-	30.42
	3/3/2015	5.48	NP	-	29.95
	<b>6/9/2015</b>	<b>6.28</b>	<b>NP</b>	-	<b>29.15</b>
	<b>8/19/2015</b>	<b>6.96</b>	<b>NP</b>	-	<b>28.47</b>
<b>CR-15</b>	6/9/1999	9.06	NP	-	26.36
(35.42)	7/8/1999	9.44	9.41	0.03	26.00
	8/16/1999	10.35	10.08	0.27	25.29
<b>CR-15</b>	9/20/1999	11.07	10.63	0.44	24.70
	2/9/2000	8.32	8.01	0.31	27.35
	5/9/2000	8.91	8.66	0.25	26.71
	5/15/2000	8.74	8.53	0.21	26.85
	5/16/2000	8.60	8.45	0.15	26.94
	6/7/2000	9.33	8.99	0.34	26.36
	7/11/2000	10.02	9.70	0.32	25.66
	8/14/2000	10.76	10.39	0.37	24.96
	12/12/2000	10.60	10.56	0.04	24.85
	4/3/2001	10.17	10.05	0.12	25.35
	6/8/2001	10.56	10.37	0.19	25.01
	7/16/2001	10.97	10.77	0.20	24.61
	9/19/2001	12.17	11.76	0.41	23.58
	12/22/2001	8.66	8.50	0.16	26.89
	3/15/2002	8.86	8.42	0.44	26.91
	6/4/2002	10.52	10.25	0.27	25.12
	9/23/2002	11.40	11.31	0.09	24.09
	12/19/2002	9.39	9.37	0.02	26.05
	3/19/2003	9.11	9.04	0.07	26.37
	6/24/2003	10.63	10.52	0.11	24.88
	9/24/2003	12.53	12.32	0.21	23.06
	12/26/2003	10.34	9.78	0.56	25.53
	3/30/2004	10.34	9.92	0.42	25.42
	6/24/2004	11.26	11.11	0.15	24.28
	9/27/2004	11.85	11.76	0.09	23.64
	12/14/2004	9.96	9.95	0.01	25.47
	3/7/2005	11.02	10.90	0.12	24.50
	6/21/2005	10.62	10.49	0.13	24.90
	9/19/2005	12.10	11.89	0.21	23.49
	12/12/2005	10.04	10.01	0.03	25.40
	3/13/2006	9.06	8.93	0.13	26.46
	6/26/2006	10.79	10.51	0.28	24.85
	9/25/2006	12.18	11.90	0.28	23.46
	12/11/2006	9.96	9.93	0.03	25.48
	3/19/2007	6.21	6.08	0.13	29.31
	6/18/2007	10.81	10.70	0.11	24.70
	9/17/2007	12.09	12.00	0.09	23.40
	12/17/2007	9.83	9.83	0.00	25.59
	3/24/2008	9.22	8.99	0.23	26.38

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	6/23/2008	10.10	9.99	0.11	25.41
	9/22/2008	11.71	NP	-	23.71
	1/5/2009	8.71	8.64	0.07	26.77
	3/16/2009	10.08	9.95	0.13	25.44
	6/15/2009	10.22	10.07	0.15	25.32
	9/14/2009	11.35	11.24	0.11	24.16
	12/21/2009	9.72	9.48	0.24	25.89
	3/16/2010	9.43	9.08	0.35	26.27
	6/21/2010	8.80	8.57	0.23	26.80
	9/20/2010	10.98	10.90	0.08	24.50
	12/15/2010	8.08	7.93	0.15	27.46
<b>CR-15</b>	3/21/2011	8.00	7.78	0.22	27.60
	6/8/2011	9.15	9.06	0.09	26.34
	9/26/2011	11.09	10.97	0.12	24.43
	12/12/2011	10.17	10.00	0.17	25.39
	3/26/2012	8.30	8.18	0.12	27.22
	6/26/2012	9.33	9.12	0.21	26.26
	9/24/2012	11.00	10.88	0.12	24.52
	12/17/2012	8.58	8.45	0.13	26.94
	3/25/2013	9.37	9.27	0.10	26.13
	6/17/2013	9.36	9.24	0.12	26.16
	9/9/2013	10.73	10.6	0.13	24.79
	12/4/2013	10.02	9.91	0.11	25.49
	3/3/2014	9.29	9.17	0.12	26.23
	6/18/2014	9.59	9.51	0.08	25.89
	8/26/2014	10.48	10.36	0.12	25.04
	12/8/2014	9.16	9.03	0.13	26.36
	3/3/2015	9.13	9.02	0.11	26.38
	<b>6/10/2015</b>	<b>10.21</b>	<b>10.10</b>	<b>0.11</b>	<b>25.30</b>
	<b>8/19/2015</b>	<b>10.99</b>	<b>10.96</b>	<b>0.03</b>	<b>24.45</b>
<b>CR-16</b>	6/9/1999	11.05	NP	-	23.72
(34.77)	7/8/1999	11.61	NP	-	23.16
	8/16/1999	11.82	NP	-	22.95
	9/20/1999	12.00	NP	-	22.77
	2/9/2000	10.39	NP	-	24.38
	5/9/2000	11.10	NP	-	23.67
	5/15/2000	11.12	NP	-	23.65
	7/11/2000	11.86	NP	-	22.91
	8/14/2000	11.96	NP	-	22.81
	12/12/2000	11.95	NP	-	22.82
	4/3/2001	11.93	NP	-	22.84
	6/8/2001	NM	NM	NM	NM
	7/16/2001	12.06	NP	-	22.71
	9/19/2001	12.60	NP	-	22.17
	12/22/2001	10.40	NP	-	24.37
	3/15/2002	10.64	NP	-	24.13
	6/4/2002	11.89	NP	-	22.88
	9/23/2002	12.16	NP	-	22.61
	12/19/2002	10.89	10.87	0.02	23.90
	3/19/2003	10.54	NP	-	24.23
	6/24/2003	11.81	NP	-	22.96
	9/24/2003	12.42	NP	-	22.35
	12/26/2003	11.29	NP	-	23.48
	3/30/2004	10.83	NP	-	23.94

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	6/24/2004	12.04	12.02	0.02	22.75
	9/27/2004	12.03	NP	-	22.74
	12/14/2004	11.08	NP	-	23.69
	3/7/2005	11.88	NP	-	22.89
	6/21/2005	11.59	NP	-	23.18
	9/19/2005	12.35	12.35	0.00	22.42
	12/12/2005	11.00	10.92	0.08	23.83
	3/13/2006	10.55	NP	-	24.22
	6/26/2006	11.38	NP	-	23.39
<b>CR-16</b>	9/25/2006	12.37	NP	-	22.40
	12/11/2006	11.10	11.08	0.02	23.69
	3/19/2007	10.34	NP	-	24.43
	6/18/2007	11.85	NP	-	22.92
	9/17/2007	12.49	NP	-	22.28
	12/17/2007	10.94	NP	-	23.83
	3/24/2008	10.56	10.56	sheen	24.21
	6/23/2008	11.64	NP	-	23.13
	9/22/2008	12.22	NP	-	22.55
	1/5/2009	9.97	9.97	sheen	24.80
	3/16/2009	11.56	NP	-	23.21
	6/15/2009	11.55	NP	-	23.22
	9/14/2009	12.18	NP	-	22.59
	12/21/2009	11.16	NP	-	23.61
	3/16/2010	10.62	NP	-	24.15
	6/21/2010	10.28	NP	-	24.49
	9/20/2010	11.90	NP	-	22.87
	12/15/2010	10.09	NP	-	24.68
	3/21/2011	9.53	NP	-	25.24
	6/8/2011	10.53	NP	-	24.24
	9/26/2011	11.86	NP	-	22.91
	12/12/2011	11.21	NP	-	23.56
	3/26/2012	9.93	NP	-	24.84
	6/26/2012	10.53	NP	-	24.24
	9/24/2012	11.83	NP	-	22.94
	12/17/2012	10.25	NP	-	24.52
	3/25/2013	10.66	NP	-	24.11
	6/17/2013	10.66	NP	-	24.11
	9/9/2013	11.75	NP	-	23.02
	12/4/2013	Inaccessible			
	3/3/2014	10.50	10.50	sheen	24.27
	6/18/2014	10.88	NP	-	23.89
	8/26/2014	11.68	NP	-	23.09
	12/8/2014	10.53	NP	-	24.24
	3/3/2015	10.66	NP	-	24.11
	<b>6/9/2015</b>	<b>11.55</b>	<b>NP</b>	<b>-</b>	<b>23.22</b>
	<b>8/19/2015</b>	<b>11.88</b>	<b>NP</b>	<b>-</b>	<b>22.89</b>
<b>CR-17</b>	6/9/1999	6.90	NP	-	27.56
(34.46)	7/8/1999	7.15	NP	-	27.31
	8/16/1999	7.81	NP	-	26.65
	9/20/1999	8.35	NP	-	26.11
	2/9/2000	6.41	NP	-	28.05
	5/9/2000	6.80	NP	-	27.66
	5/15/2000	6.68	NP	-	27.78
	7/11/2000	7.50	NP	-	26.96

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	8/14/2000	8.21	NP	-	26.25
	12/12/2000	8.26	NP	-	26.20
	4/3/2001	7.90	NP	-	26.56
	6/8/2001	NM	NM	NM	NM
	7/16/2001	8.59	NP	-	25.87
	9/19/2001	9.70	NP	-	24.76
	12/22/2001	6.57	NP	-	27.89
<b>CR-17</b>	3/15/2002	6.47	NP	-	27.99
	6/4/2002	7.82	NP	-	26.64
	9/23/2002	8.81	NP	-	25.65
	12/19/2002	7.92	NP	-	26.54
	3/19/2003	6.70	NP	-	27.76
	6/24/2003	7.96	NP	-	26.50
	9/24/2003	9.63	NP	-	24.83
	12/26/2003	7.51	7.10	0.41	27.28
	3/30/2004	7.32	NP	-	27.14
	6/24/2004	8.65	NP	-	25.81
	9/27/2004	8.32	NP	-	26.14
	12/14/2004	7.44	NP	-	27.02
	3/7/2005	8.28	NP	-	26.18
	6/21/2005	7.80	NP	-	26.66
	9/19/2005	9.50	NP	-	24.96
	12/12/2005	7.22	NP	-	27.24
	3/13/2006	6.64	NP	-	27.82
	6/26/2006	7.71	NP	-	26.75
	9/25/2006	9.57	NP	-	24.89
	12/11/2006	7.11	NP	-	27.35
	3/19/2007	6.91	NP	-	27.55
	6/18/2007	8.17	NP	-	26.29
	9/17/2007	9.98	NP	-	24.48
	12/17/2007	7.13	NP	-	27.33
	3/24/2008	6.52	NP	-	27.94
	6/23/2008	7.45	NP	-	27.01
	9/22/2008	8.98	NP	-	25.48
	1/5/2009	6.48	NP	-	27.98
	3/16/2009	7.36	NP	-	27.10
	6/15/2009	7.52	NP	-	26.94
	9/14/2009	8.97	NP	-	25.49
	12/21/2009	NM	NM	NM	NM
	3/16/2010	6.72	NP	-	27.74
	6/21/2010	6.51	NP	-	27.95
	9/20/2010	8.52	NP	-	25.94
	12/15/2010	6.22	NP	-	28.24
	3/21/2011	6.19	NP	-	28.27
	6/8/2011	6.86	NP	-	27.60
	9/26/2011	8.68	NP	-	25.78
	12/12/2011	7.46	NP	-	27.00
	3/26/2012	6.32	NP	-	28.14
	6/26/2012	8.90	NP	-	25.56
	9/24/2012	8.58	NP	-	25.88
	12/17/2012	6.42	NP	-	28.04
	3/25/2013	6.99	NP	-	27.47
	6/17/2013	6.91	NP	-	27.55
	9/9/2013	8.11	NP	-	26.35

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	12/4/2013	Inaccessible			
	3/3/2014	6.87	NP	-	27.59
	6/18/2014	7.23	NP	-	27.23
<b>CR-17</b>	8/26/2014	8.04	NP	-	26.42
	12/8/2014	6.71	NP	-	27.75
	3/3/2015	6.82	NP	-	27.64
	<b>6/9/2015</b>	<b>7.73</b>	<b>NP</b>	-	<b>26.73</b>
	<b>8/19/2015</b>	<b>8.71</b>	<b>NP</b>	-	<b>25.75</b>
<b>CR-18</b>	6/9/1999	3.77	NP	-	31.07
(34.84)	7/8/1999	4.14	NP	-	30.70
	8/16/1999	5.19	NP	-	29.65
	9/20/1999	NM	NM	-	NM
	2/9/2000	NM	NM	-	NM
	5/9/2000	NM	NM	-	NM
	5/15/2000	NM	NM	-	NM
	7/11/2000	NM	NM	-	NM
	8/14/2000	NM	NM	-	NM
	12/12/2000	NM	NM	-	NM
	4/3/2001	NM	NM	-	NM
	6/8/2001	NM	NM	-	NM
	7/16/2001	NM	NM	-	NM
	9/19/2001	NM	NM	-	NM
	12/22/2001	NM	NM	-	NM
	3/15/2002	NM	NM	-	NM
	12/17/2007	Abandoned			
<b>CR-19</b>	6/9/1999	5.10	NP	-	30.39
(35.49)	7/8/1999	6.24	5.27	0.97	30.03
	8/16/1999	7.65	5.87	1.78	29.26
	9/20/1999	8.86	6.38	2.48	28.61
	2/9/2000	5.94	3.35	2.59	31.62
	5/9/2000	6.19	4.38	1.81	30.75
	5/15/2000	4.27	4.22	0.05	31.26
	5/16/2000	4.32	4.26	0.06	31.22
	6/7/2000	5.57	4.78	0.79	30.55
	7/11/2000	6.17	5.35	0.82	29.98
	8/14/2000	7.50	5.94	1.56	29.24
	12/12/2000	8.69	5.90	2.79	29.03
	4/3/2001	8.03	5.61	2.42	29.40
	6/8/2001	7.77	5.75	2.02	29.34
	7/16/2001	7.99	6.32	1.67	28.84
	9/19/2001	8.86	7.14	1.72	28.01
	12/22/2001	4.62	4.24	0.38	31.17
	3/15/2002	4.47	4.13	0.34	31.29
	6/4/2002	6.92	5.39	1.53	29.79
	9/23/2002	8.48	6.91	1.57	28.27
	12/19/2002	7.09	6.17	0.92	29.14
	3/19/2003	4.83	4.40	0.43	31.00
	6/24/2003	6.51	5.50	1.01	29.79
	9/24/2003	7.68	6.99	0.69	28.36
	12/26/2003	7.41	5.21	2.20	29.84
	3/30/2004	7.12	5.49	1.63	29.67
	6/24/2004	7.40	6.62	0.78	28.71
	9/27/2004	8.28	7.65	0.63	27.71
	12/14/2004	6.63	6.37	0.26	29.07

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	3/7/2005	6.94	6.92	0.02	28.57
<b>CR-19</b>	6/21/2005	6.43	5.83	0.60	29.54
	9/19/2005	8.80	7.32	1.48	27.87
	12/12/2005	5.19	5.19	Sheen	30.30
	3/13/2006	4.45	4.45	Sheen	31.04
	6/26/2006	6.00	5.93	0.07	29.55
	9/25/2006	8.13	7.39	0.74	27.95
	12/11/2006	4.78	4.78	sheen	30.71
	3/19/2007	4.63	NP	-	30.86
	6/18/2007	6.51	6.29	0.22	29.16
	9/17/2007	7.89	7.54	0.35	27.88
	12/17/2007	5.94	NP	-	29.55
	3/24/2008	4.89	4.83	0.06	30.65
	6/23/2008	6.21	6.00	0.21	29.45
	9/22/2008	7.97	7.49	0.48	27.90
	1/5/2009	5.05	4.60	0.45	30.80
	3/16/2009	6.24	5.69	0.55	29.69
	6/15/2009	6.42	5.98	0.44	29.42
	9/14/2009	7.40	7.18	0.22	28.27
	12/21/2009	NM	NM	NM	NM
	3/16/2010	4.98	4.91	0.07	30.57
	6/21/2010	5.82	5.82	sheen	29.67
	9/20/2010	6.81	6.72	0.09	28.75
	12/15/2010	Inaccessible			
	3/21/2011	4.38	4.37	0.01	31.12
	6/8/2011	5.74	NP	-	29.75
	9/26/2011	7.20	7.05	0.15	28.41
	12/12/2011	6.17	6.00	0.17	29.46
	3/26/2012	4.29	4.27	0.02	31.22
	6/26/2012	5.82	5.51	0.31	29.92
	9/24/2012	6.92	6.73	0.19	28.72
	12/17/2012	Inaccessible			
	3/25/2013	5.76	5.43	0.33	29.99
	6/17/2013	5.84	5.36	0.48	30.03
	9/9/2013	6.89	6.51	0.38	28.90
	12/4/2013	6.46	6.02	0.44	29.38
	3/3/2014	4.95	4.93	0.02	30.56
	6/18/2014	6.00	5.55	0.45	29.85
	8/26/2014	6.75	6.51	0.24	28.93
	12/8/2014	5.20	5.11	0.09	30.36
	3/3/2015	5.73	5.34	0.39	30.07
	<b>6/10/2015</b>	<b>6.78</b>	<b>6.22</b>	<b>0.56</b>	<b>29.16</b>
	8/19/2015	Inaccessible			
<b>CR-20</b>	7/8/1999	7.69	NP	-	27.45
(35.14)	8/16/1999	8.50	NP	-	26.64
	9/20/1999	9.14	NP	-	26.00
	2/9/2000	6.67	NP	-	28.47
	5/9/2000	7.25	NP	-	27.89
	5/15/2000	6.98	NP	-	28.16
	7/11/2000	8.15	NP	-	26.99
	8/14/2000	8.95	NP	-	26.19
	12/12/2000	9.12	NP	-	26.02
	4/3/2001	8.75	NP	-	26.39
<b>CR-20</b>	6/8/2001	9.04	NP	-	26.10

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	7/16/2001	9.51	NP	-	25.63
	9/19/2001	10.91	NP	-	24.23
	12/20/2001	6.96	NP	-	28.18
	3/15/2002	6.91	NP	-	28.23
	6/4/2002	8.74	NP	-	26.40
	9/23/2002	10.29	NP	-	24.85
	12/19/2002	8.88	NP	-	26.26
	3/19/2003	7.35	NP	-	27.79
	6/24/2003	9.05	NP	-	26.09
	9/24/2003	11.30	NP	-	23.84
	12/26/2003	8.08	8.06	0.02	27.08
	3/30/2004	8.35	NP	-	26.79
	6/24/2004	9.89	NP	-	25.25
	9/27/2004	9.59	NP	-	25.55
	12/14/2004	8.25	NP	-	26.89
	3/7/2005	9.60	NP	-	25.54
	6/21/2005	8.79	NP	-	26.35
	9/19/2005	10.92	NP	-	24.22
	12/12/2005	8.26	NP	-	26.88
	3/13/2006	7.09	NP	-	28.05
	6/26/2006	8.72	NP	-	26.42
	9/25/2006	11.00	NP	-	24.14
	12/11/2006	8.23	NP	-	26.91
	3/19/2007	7.22	NP	-	27.92
	6/18/2007	9.13	NP	-	26.01
	9/17/2007	11.02	NP	-	24.12
	12/17/2007	7.98	NP	-	27.16
	3/24/2008	6.47	NP	-	28.67
	6/23/2008	8.14	NP	-	27.00
	9/22/2008	10.34	NP	-	24.80
	1/5/2009	6.78	NP	-	28.36
	3/16/2009	8.09	NP	-	27.05
	6/15/2009	8.24	NP	-	26.90
	9/14/2009		Inaccessible		
	12/21/2009		Inaccessible		
	3/16/2010	NM	NM	NM	NM
	6/21/2010	6.99	NP	-	28.15
	9/20/2010	NM	NM	NM	NM
	12/14/2010		Inaccessible		
	3/21/2011	6.10	NP	-	29.04
	6/8/2011	7.19	NP	-	27.95
	9/26/2011	9.63	NP	-	25.51
	12/12/2011	8.29	NP	-	26.85
	3/26/2012	6.74	NP	-	28.40
	6/26/2012	7.29	NP	-	27.85
	9/24/2012	9.55	NP	-	25.59
	12/17/2012		Inaccessible		
	3/25/2013	7.49	NP	-	27.65
	6/17/2013	7.35	NP	-	27.79
<b>CR-20</b>	9/9/2013	8.93	NP	-	26.21
	12/4/2013	8.03	NP	-	27.11
	3/3/2014	7.20	NP	-	27.94
	6/18/2014	7.70	NP	-	27.44
	8/26/2014	8.75	NP	-	26.39

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	12/8/2014	7.03	NP	-	28.11
	3/3/2015	7.19	NP	-	27.95
	<b>6/9/2015</b>	<b>8.38</b>	<b>NP</b>	-	<b>26.76</b>
	<b>8/19/2015</b>	<b>9.51</b>	<b>NP</b>	-	<b>25.63</b>
<b>CR-21A</b>	12/12/2000	5.54	NP	-	28.57
(34.11)	4/5/2001	5.21	5.11	0.10	28.98
	6/8/2001	5.61	5.11	0.50	28.90
	7/16/2001	6.37	5.25	1.12	28.64
	9/19/2001	Covered With Construction Equipment			
	12/22/2001	NM	NM	NM	NM
	3/15/2002	NM	NM	>1.0E	NM
	6/4/2002	NM	4.85E	>1.5E	NM
	9/23/2002	8.10E	6.10E	2.0E	NM
	12/19/2002	5.19	4.95	0.24	29.11
	3/19/2003	3.6E	3.4E	0.2E	NM
	6/24/2003	5.6E	5.33	0.25E	NM
	9/24/2003	7.1E	6.80	0.3E	NM
	12/26/2003	3.75	3.63E	0.12E	NM
	3/30/2004	5.35	4.99	0.36	29.05
	6/24/2004	6.52	6.17	0.35	27.87
	9/27/2004	7.09	6.59	0.50	27.42
	12/14/2004	5.69	5.48	0.21	28.59
	3/7/2005	5.80	5.66	0.14	28.42
	6/22/2005	5.78	5.53	0.25	28.53
	9/19/2005	7.41	6.89	0.52	27.12
	12/12/2005	5.29	5.08	0.21	28.99
	3/13/2006	4.35	4.18	0.17	29.90
	6/26/2006	5.35	5.23	0.12	28.86
	9/25/2006	6.72	NP	-	27.39
	12/11/2006	4.92	4.68	0.24	29.38
	3/19/2007	5.00	4.50	0.50	29.51
	6/18/2007	-	-	-	-
	9/17/2007	7.36	7.30	0.06	26.80
	12/17/2007	Inaccessible			
	3/24/2008	4.10	4.05	0.05	30.05
	6/23/2008	Inaccessible			
	9/22/2008	Inaccessible			
	1/5/2009	Inaccessible			
	3/16/2009	Inaccessible			
	6/15/2009	Inaccessible			
	9/14/2009	Inaccessible			
	12/21/2009	Inaccessible			
	3/16/2010	4.86	4.45	0.41	29.58
	6/21/2010	Inaccessible			
	9/20/2010	Inaccessible			
	12/15/2010	Inaccessible			
	3/21/2011	Inaccessible			
<b>CR-21A</b>	6/8/2011	Inaccessible			
	9/26/2011	Inaccessible			
	12/12/2011	Inaccessible			
	3/26/2012	Inaccessible			
	6/26/2012	Inaccessible			
	9/24/2012	Inaccessible			
	12/12/2012	Inaccessible			

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	3/25/2013	Inaccessible			
	6/17/2013	Inaccessible			
	7/17/2013	5.51	5.14	0.37	28.90
	9/9/2013	5.74	5.71	0.03	28.39
	12/4/2013	Inaccessible			
	3/3/2014	NM	NM	NM	NM
	6/18/2014	NM	NM	NM	NM
	9/30/2014	6.33	6.28	0.05	27.82
	12/8/2014	4.65	4.64	0.01	29.47
	3/3/2015	4.38	4.37	0.01	29.74
	<b>6/9/2015</b>	<b>5.35</b>	<b>5.32</b>	<b>0.03</b>	<b>28.78</b>
	<b>8/19/2015</b>	<b>6.17</b>	<b>6.16</b>	<b>0.01</b>	<b>27.95</b>
<b>CR-21B</b>	12/12/2000	6.53	NP	-	27.83
(34.36)	4/3/2001	5.62	NP	-	28.74
	6/8/2001	NM	NM	NM	NM
	7/16/2001	6.88	NP	-	27.48
	9/19/2001	7.41	NP	-	26.95
	12/20/2001	4.68	NP	-	29.68
	3/15/2002	4.48	NP	-	29.88
	6/4/2002	5.59	NP	-	28.77
	9/23/2002	7.77	NP	-	26.59
	12/19/2002	5.79	NP	-	28.57
	3/19/2003	4.92	NP	-	29.44
	6/24/2003	6.21	NP	-	28.15
	9/24/2003	7.77	NP	-	26.59
	12/26/2003	4.41	NP	-	29.95
	3/30/2004	5.30	NP	-	29.06
	6/24/2004	6.67	NP	-	27.69
	9/27/2004	6.99	NP	-	27.37
	12/14/2004	6.52	NP	-	27.84
	3/7/2005	6.27	NP	-	28.09
	6/22/2005	6.09	NP	-	28.27
	9/19/2005	7.75	NP	-	26.61
	12/12/2005	5.65	NP	-	28.71
	3/13/2006	4.45	NP	-	29.91
	6/26/2006	5.89	NP	-	28.47
	9/25/2006	7.68	NP	-	26.68
	12/11/2006	5.33	NP	-	29.03
	3/19/2007	4.47	NP	-	29.89
	6/18/2007	-	-	-	-
	9/17/2007	-	-	-	-
	12/17/2007	5.13	-	-	29.23
	3/24/2008	Inaccessible			
	6/23/2008	Inaccessible			
	9/22/2008	Inaccessible			
<b>CR-21B</b>	1/5/2009	Inaccessible			
	3/16/2009	Inaccessible			
	6/15/2009	Inaccessible			
	9/14/2009	Inaccessible			
	12/21/2009	Inaccessible			
	3/16/2010	Inaccessible			
	6/21/2010	Inaccessible			
	9/20/2010	Inaccessible			
	12/15/2010	Inaccessible			

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	3/21/2011		Inaccessible	
	6/8/2011		Inaccessible	
	9/26/2011		Inaccessible	
	12/12/2011		Inaccessible	
	3/26/2012		Inaccessible	
	6/26/2012		Inaccessible	
	9/24/2012		Inaccessible	
	12/17/2012		Inaccessible	
	3/25/2013		Inaccessible	
	6/17/2013		Inaccessible	
	7/17/2013	5.35	NP	- 29.01
	9/9/2013	5.88	NP	- 28.48
	12/4/2013		Inaccessible	
	3/3/2014	NM	NM	NM
	6/18/2014	4.89	NP	- 29.47
	9/30/2014	6.52	NP	- 27.84
	12/8/2014	4.41	NP	- 29.95
	3/3/2015	4.41	NP	- 29.95
	<b>6/9/2015</b>	<b>5.43</b>	<b>NP</b>	<b>- 28.93</b>
	<b>8/19/2015</b>	<b>6.54</b>	<b>NP</b>	<b>- 27.82</b>
<b>CR-22A</b>	12/12/2000	11.92	NP	- 22.88
(34.80)	4/3/2001	11.51	NP	- 23.29
	6/8/2001	NM	NM	NM
	7/16/2001	11.89	NP	- 22.91
	9/19/2001	12.52	NP	- 22.28
	12/22/2001	NM	NM	NM
	3/15/2002	10.36	NP	- 24.44
	6/4/2002	11.32	NP	- 23.48
	9/23/2002	12.12	NP	- 22.68
	12/19/2002	11.93	NP	- 22.87
	3/19/2003	10.99	NP	- 23.81
	6/24/2003	11.83	NP	- 22.97
	9/24/2003	12.96	NP	- 21.84
	12/26/2003	11.65	NP	- 23.15
	3/30/2004	11.79	NP	- 23.01
	6/24/2004	12.28	NP	- 22.52
	9/27/2004	12.33	NP	- 22.47
	12/14/2004	11.98	NP	- 22.82
	3/7/2005	12.02	NP	- 22.78
	6/21/2005	11.85	NP	- 22.95
	9/19/2005	12.73	NP	- 22.07
	12/12/2005	11.59	NP	- 23.21
	3/13/2006	10.98	NP	- 23.82
<b>CR-22A</b>	6/26/2006	11.42	NP	- 23.38
	9/25/2006	12.82	12.82	sheen 21.98
	12/11/2006	11.42	NP	- 23.38
	3/19/2007	10.84	NP	- 23.96
	6/18/2007	11.93	NP	- 22.87
	9/17/2007	12.67	NP	- 22.13
	12/17/2007	11.19	NP	- 23.61
	3/24/2008	10.66	NP	- 24.14
	6/23/2008	11.37	NP	- 23.43
	9/22/2008	12.48	NP	- 22.32
	1/5/2009	10.36	NP	- 24.44

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	3/16/2009	11.34	NP	-	23.46
	6/15/2009		Inaccessible		
	9/14/2009	12.21	NP	-	22.59
	12/21/2009	11.00	NP	-	23.80
	3/16/2010	10.56	NP	-	24.24
	6/21/2010	10.11	NP	-	24.69
	9/20/2010	11.91	NP	-	22.89
	12/15/2010	10.14	NP	-	24.66
	3/21/2011	9.61	NP	-	25.19
	6/8/2011	10.53	NP	-	24.27
	9/26/2011	11.95	NP	-	22.85
	12/12/2011	11.27	NP	-	23.53
	3/26/2012	9.91	NP	-	24.89
	6/26/2012	10.49	NP	-	24.31
	9/24/2012		Inaccessible		
	12/17/2012	9.60	NP	-	25.20
	3/25/2013	10.8	NP	-	24.00
	6/17/2013	10.81	NP	-	23.99
	9/9/2013	11.77	NP	-	23.03
	12/4/2013	11.55	NP	-	23.25
	3/3/2014	NM	NM	NM	NM
	6/18/2014	10.97	NP	-	23.83
	8/26/2014	11.63	NP	-	23.17
	12/8/2014	10.76	NP	-	24.04
	3/3/2015	10.71	NP	-	24.09
	<b>6/9/2015</b>	<b>11.42</b>	<b>NP</b>	-	<b>23.38</b>
	<b>8/19/2015</b>	<b>12.11</b>	<b>NP</b>	-	<b>22.69</b>
<b>CR-22B</b>	12/12/2000	11.27	NP	-	23.92
(35.19)	4/3/2001	10.70	NP	-	24.49
	6/8/2001	NM	NM	NM	NM
	7/16/2001	11.31	NP	-	23.88
	9/19/2001	12.02	NP	-	23.17
	12/20/2001	9.63	NP	-	25.56
	3/15/2002	9.52	NP	-	25.67
	6/4/2002	10.59	NP	-	24.60
	9/23/2002	11.57	NP	-	23.62
	12/19/2002	11.39	NP	-	23.80
	3/19/2003	10.02	NP	-	25.17
	6/24/2003	10.52	NP	-	24.67
	9/24/2003	12.24	NP	-	22.95
	12/26/2003	10.64	NP	-	24.55
<b>CR-22B</b>	3/30/2004	10.33	NP	-	24.86
	6/24/2004	11.26	NP	-	23.93
	9/27/2004	11.25	NP	-	23.94
	12/14/2004	10.87	NP	-	24.32
	3/7/2005	11.13	NP	-	24.06
	6/21/2005	10.90	NP	-	24.29
	9/19/2005	11.84	NP	-	23.35
	12/12/2005	10.59	NP	-	24.60
	3/13/2006	9.65	NP	-	25.54
	6/26/2006	10.71	NP	-	24.48
	9/25/2006	12.02	NP	-	23.17
	12/11/2006	10.39	NP	-	24.80
	3/19/2007	9.64	NP	-	25.55

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	6/18/2007	11.00	NP	-	24.19
	9/17/2007	12.10	NP	-	23.09
	12/17/2007	10.24	NP	-	24.95
	3/24/2008	9.64	NP	-	25.55
	6/23/2008	10.42	NP	-	24.77
	9/22/2008	11.82	NP	-	23.37
	1/5/2009	9.70	NP	-	25.49
	3/16/2009	10.25	NP	-	24.94
	6/15/2009	Inaccessible			
	9/14/2009	11.50	NP	-	23.69
	12/21/2009	11.14	NP	-	24.05
	3/16/2010	9.60	NP	-	25.59
	6/21/2010	9.09	NP	-	26.10
	9/20/2010	11.07	NP	-	24.12
	12/15/2010	9.03	NP	-	26.16
	3/21/2011	8.41	NP	-	26.78
	6/8/2011	9.35	NP	-	25.84
	9/26/2011	19.15	NP	-	16.04
	12/12/2011	10.33	NP	-	24.86
	3/26/2012	8.75	NP	-	26.44
	6/26/2012	9.46	NP	-	25.73
	9/24/2012	11.00	NP	-	24.19
	12/17/2012	9.12	NP	-	26.07
	3/25/2013	9.65	NP	-	25.54
	6/17/2013	9.68	NP	-	25.51
	9/9/2013	10.80	NP	-	24.39
	12/4/2013	10.47	NP	-	24.72
	3/3/2014	NM	NM	NM	NM
	6/18/2014	9.87	NP	-	25.32
	8/26/2014	10.59	NP	-	24.60
	12/8/2014	-cemented shut-			
	3/3/2015	-cemented shut-			
	<b>6/9/2015</b>	<b>10.26</b>	<b>NP</b>	-	<b>24.93</b>
	<b>8/19/2015</b>	<b>11.06</b>	<b>NP</b>	-	<b>24.13</b>
<b>CR-23A</b>	12/12/2000	13.56	NP	-	22.79
(36.35)	4/3/2001	13.20	NP	-	23.15
	6/8/2001	NM	NM	NM	NM
	7/16/2001	13.52	NP	-	22.83
	9/19/2001	14.19	NP	-	22.16
<b>CR-23A</b>	12/22/2001	NM	NM	-	NM
	3/15/2002	11.84	NP	-	24.51
	6/4/2002	12.83	NP	-	23.52
	9/23/2002	13.66	NP	-	22.69
	12/19/2002	13.66	NP	-	22.69
	3/19/2003	11.97	NP	-	24.38
	6/24/2003	12.64	NP	-	23.71
	9/24/2003	13.95	NP	-	22.40
	12/26/2003	12.70	NP	-	23.65
	3/30/2004	12.47	NP	-	23.88
	6/24/2004	13.46	NP	-	22.89
	9/27/2004	13.45	NP	-	22.90
	12/14/2004	13.14	NP	-	23.21
	3/7/2005	13.35	NP	-	23.00
	6/21/2005	12.92	NP	-	23.43

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	9/19/2005	13.95	NP	-	22.40
	12/12/2005	12.74	NP	-	23.61
	3/13/2006	11.96	NP	-	24.39
	6/26/2006	12.96	NP	-	23.39
	9/25/2006	13.95	NP	-	22.40
	12/11/2006	12.62	NP	-	23.73
	3/19/2007	11.93	NP	-	24.42
	6/18/2007	13.16	NP	-	23.19
	9/17/2007	14.38	NP	-	21.97
	12/17/2007	12.20	NP	-	24.15
	3/24/2008	12.01	NP	-	24.34
	6/23/2008	12.98	NP	-	23.37
	9/22/2008	Inaccessible			
	1/5/2009	11.39	NP	-	24.96
	3/16/2009	12.75	NP	-	23.60
	6/15/2009	12.44	NP	-	23.91
	9/14/2009	13.56	13.55	0.01	22.80
	12/21/2009	NM	NM	NM	NM
	3/16/2010	12.04	NP	-	24.31
	6/21/2010	11.50	NP	-	24.85
	9/20/2010	13.19	NP	-	23.16
	12/15/2010	Inaccessible			
	3/21/2011	10.64	NP	-	25.71
	6/8/2011	11.53	NP	-	24.82
	9/26/2011	13.15	NP	-	23.20
	12/12/2011	12.64	NP	NP	23.71
	3/26/2012	11.15	11.13	0.02	25.22
	6/26/2012	11.82	NP	-	24.53
	9/24/2012	13.23	NP	-	23.12
	12/17/2012	11.15	NP	-	25.20
	3/25/2013	12.05	NP	-	24.3
	6/17/2013	11.91	NP	-	24.44
	9/9/2013	13.25	13.04	-	23.1
	12/4/2013	12.85	12.74	0.11	23.59
	3/3/2014	NM	NM	NM	NM
<b>CR-23A</b>	6/18/2014	NM	NM	NM	NM
	8/26/2014	Inaccessible			
	12/8/2014	12.12	11.97	0.15	24.35
	3/3/2015	11.90	11.55	0.35	24.73
	<b>6/10/2015</b>	<b>12.81</b>	<b>12.42</b>	<b>0.39</b>	<b>23.85</b>
	<b>8/19/2015</b>	<b>13.32</b>	<b>13.32</b>	-	<b>23.03</b>
<b>CR-23B</b>	12/12/2000	12.57	NP	-	23.70
(36.27)	4/3/2001	12.18	NP	-	24.09
	6/8/2001	NM	NM	NM	NM
	7/16/2001	12.71	NP	-	23.56
	9/19/2001	13.79	NP	-	22.48
	12/20/2001	11.04	NP	-	25.23
	3/15/2002	10.94	NP	-	25.33
	6/4/2002	12.96	NP	-	23.31
	9/23/2002	12.79	NP	-	23.48
	12/19/2002	12.79	NP	-	23.48
	3/19/2003	12.55	NP	-	23.72
	6/24/2003	12.65	NP	-	23.62
	9/24/2003	13.57	NP	-	22.70

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

12/26/2003	11.85	NP	-	24.42	
3/30/2004	11.46	NP	-	24.81	
6/24/2004	12.73	NP	-	23.54	
9/27/2004	12.62	NP	-	23.65	
12/14/2004	12.36	NP	-	23.91	
3/7/2005	12.61	NP	-	23.66	
6/21/2005	12.33	NP	-	23.94	
9/19/2005	13.29	NP	-	22.98	
12/12/2005	12.00	NP	-	24.27	
3/13/2006	10.98	NP	-	25.29	
6/26/2006	12.11	NP	-	24.16	
9/25/2006	13.23	NP	-	23.04	
12/11/2006	11.81	NP	-	24.46	
3/19/2007	11.25	NP	-	25.02	
6/18/2007	12.40	NP	-	23.87	
9/17/2007	13.99	NP	-	22.28	
12/17/2007	11.70	NP	-	24.57	
3/24/2008	11.09	NP	-	25.18	
6/23/2008	11.91	NP	-	24.36	
9/22/2008	NM	NM	NM	NM	
1/5/2009	11.00	NP	-	25.27	
3/16/2009	11.80	NP	-	24.47	
6/15/2009	13.81	NP	-	22.46	
9/14/2009	12.81	NP	-	23.46	
12/21/2009	NM	NM	NM	NM	
3/16/2010	11.80	NP	-	24.47	
6/21/2010	11.24	NP	-	25.03	
9/20/2010	12.19	NP	-	24.08	
12/15/2010	Inaccessible				
3/21/2011	9.86	NP	-	26.41	
6/8/2011	10.66	NP	-	25.61	
9/26/2011	12.36	NP	-	23.91	
12/12/2011	11.8	NP	-	24.47	
<b>CR-23B</b>	3/26/2012	10.22	NP	-	26.05
	6/26/2012	9.91	NP	-	26.36
	9/24/2012	11.91	NP	-	24.36
	12/17/2012	10.56	NP	-	25.71
	3/25/2013	11.02	NP	-	25.25
	6/17/2013	11.10	NP	-	25.17
	9/9/2013	12.23	NP	-	24.04
	12/4/2013	11.91	NP	-	24.36
	3/3/2014	NM	NM	NM	NM
	6/18/2014	NM	NM	NM	NM
	8/26/2014	Inaccessible			
	12/8/2014	11.08	NP	-	25.19
	3/3/2015	10.92	NP	-	25.35
	<b>6/9/2015</b>	<b>11.70</b>	<b>NP</b>	-	<b>24.57</b>
	<b>8/19/2015</b>	<b>12.50</b>	<b>NP</b>	-	<b>23.77</b>
<b>CR-24A</b>	12/12/2000	15.15	NP	-	21.06
(36.21)	4/3/2001	14.46	NP	-	21.75
	6/8/2001	NM	NM	NM	NM
	7/16/2001	14.64	NP	-	21.57
	9/19/2001	15.11	NP	-	21.10
	12/22/2001	NM	NM	-	NM

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	3/15/2002	13.29	NP	-	22.92
	6/4/2002	14.07	NP	-	22.14
	9/23/2002	14.82	NP	-	21.39
	12/19/2002	14.72	NP	-	21.49
	3/19/2003	13.53	NP	-	22.68
	6/24/2003	14.04	NP	-	22.17
	9/24/2003	14.88	NP	-	21.33
	12/26/2003	14.17	NP	-	22.04
	3/30/2004	12.61	NP	-	23.60
	6/24/2004	14.45	NP	-	21.76
	9/27/2004	14.65	NP	-	21.56
	12/14/2004	14.45	NP	-	21.76
	3/7/2005	14.24	NP	-	21.97
	6/21/2005	14.13	NP	-	22.08
	9/19/2005	14.77	NP	-	21.44
	12/12/2005	13.09	NP	-	23.12
	3/13/2006	12.95	NP	-	23.26
	6/26/2006	13.75	NP	-	22.46
	9/25/2006	14.65	NP	-	21.56
	12/11/2006	13.05	NP	-	23.16
	3/19/2007	12.69	NP	-	23.52
	6/18/2007	14.14	NP	-	22.07
	9/17/2007	14.98	NP	-	21.23
	12/17/2007	13.67	NP	-	22.54
	3/24/2008	13.11	NP	-	23.10
	6/23/2008	13.73	NP	-	22.48
	9/22/2008	14.81	NP	-	21.40
	1/5/2009	12.55	NP	-	23.66
	3/16/2009	13.81	NP	-	22.40
	6/15/2009	14.60	NP	-	21.61
	9/14/2009	14.35	NP	-	NM
<b>CR-24A</b>	12/21/2009	13.54	NP	-	NM
	3/16/2010	13.16	NP	-	NM
	6/21/2010	12.78	NP	-	23.43
	9/20/2010	14.12	NP	-	22.09
	12/15/2010	12.90	NP	-	23.31
	3/21/2011	12.00	NP	-	24.21
	6/8/2011	12.63	NP	-	23.58
	9/26/2011	14.11	NP	-	22.10
	12/12/2011	13.76	NP	NP	22.45
	3/26/2012	12.58	NP	NP	23.63
	6/26/2012	12.94	NP	-	23.27
	9/24/2012		Inaccessible		
	12/17/2012	12.77	NP	-	23.44
	3/25/2013	13.25	NP	-	22.96
	6/17/2013	13.11	NP	-	23.10
	9/9/2013	14.17	NP	-	22.04
	12/4/2013	13.54	NP	-	22.67
	3/3/2014	NM	NM	NM	NM
	6/18/2014	12.94	NP	-	23.27
	8/26/2014	13.84	NP	-	22.37
	12/8/2014	13.31	NP	-	22.90
	3/3/2015	12.96	NP	-	23.25
	<b>6/9/2015</b>	<b>13.60</b>	<b>NP</b>	<b>-</b>	<b>22.61</b>

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	<b>8/19/2015</b>	<b>14.21</b>	<b>NP</b>	-	<b>22.00</b>
<b>CR-24B</b>	12/12/2000	13.78	NP	-	22.54
(36.32)	4/3/2001	13.40	NP	-	22.92
	6/8/2001	NM	NM	NM	NM
	7/16/2001	13.77	NP	-	22.55
	9/19/2001	14.44	NP	-	21.88
	12/20/2001	12.41	NP	-	23.91
	3/15/2002	12.06	NP	-	24.26
	6/4/2002	12.94	NP	-	23.38
	9/23/2002	13.42	NP	-	22.90
	12/19/2002	13.78	NP	-	22.54
	3/19/2003	12.52	NP	-	23.80
	6/24/2003	13.06	NP	-	23.26
	9/24/2003	14.32	NP	-	22.00
	12/26/2003	12.97	NP	-	23.35
	3/30/2004	13.52	NP	-	22.80
	6/24/2004	13.58	NP	-	22.74
	9/27/2004	13.61	NP	-	22.71
	12/14/2004	13.41	NP	-	22.91
	3/7/2005	13.66	NP	-	22.66
	6/21/2005	13.20	NP	-	23.12
	9/19/2005	14.03	NP	-	22.29
	12/12/2005	12.95	NP	-	23.37
	3/13/2006	12.03	NP	-	24.29
	6/26/2006	12.87	NP	-	23.45
	9/25/2006	14.03	14.03	sheen	22.29
	12/11/2006	13.72	NP	-	22.60
	3/19/2007	12.09	NP	-	24.23
	6/18/2007	13.22	NP	-	23.10
<b>CR-24B</b>	9/17/2007	14.23	NP	-	22.09
	12/17/2007	12.65	NP	-	23.67
	3/24/2008	12.03	NP	-	24.29
	6/23/2008	12.70	NP	-	23.62
	9/22/2008	13.91	NP	-	22.41
	1/5/2009	12.11	NP	-	24.21
	3/16/2009	12.84	12.84	sheen	23.48
	6/15/2009	12.60	NP	-	23.72
	9/14/2009	13.30	NP	-	23.02
	12/21/2009	13.67	NP	-	22.65
	3/16/2010	12.02	NP	-	24.30
	6/21/2010	11.92	NP	-	24.40
	9/20/2010	13.36	NP	-	22.96
	12/14/2010	11.96	NP	-	24.36
	3/21/2011	10.75	NP	-	25.57
	6/8/2011	11.28	NP	-	25.04
	9/26/2011	13.02	NP	-	23.30
	12/12/2011	12.68	NP	-	23.64
	3/26/2012	11.22	NP	-	25.10
	6/26/2012	11.81	NP	-	24.51
	9/24/2012			Inaccessible	
	12/17/2012	11.49	NP	-	24.83
	3/25/2013	12.05	NP	-	24.27
	6/17/2013	11.96	NP	-	24.36
	9/9/2013	13.09	NP	-	23.23

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	12/4/2013	12.85	NP	-	23.47
	3/3/2014	NM	NM	NM	NM
	6/18/2014	12.18	NP	-	24.14
	8/26/2014	12.91	NP	-	23.41
	12/8/2014	12.16	NP	-	24.16
	3/3/2015	11.89	NP	-	24.43
	<b>6/9/2015</b>	<b>12.59</b>	<b>NP</b>	-	<b>23.73</b>
	<b>8/19/2015</b>	<b>13.38</b>	<b>NP</b>	-	<b>22.94</b>
<b>CR-25</b>	12/12/2000	8.23	NP	-	26.04
(34.27)	4/3/2001	7.69	7.25	0.44	26.93
	6/8/2001	7.49	7.15	0.34	27.05
	7/16/2001	8.67	7.73	0.94	26.35
	9/19/2001	9.02	8.75	0.27	25.47
	12/20/2001	6.96	6.81	0.15	27.43
	3/15/2002	6.66	6.51	0.15	27.73
	6/4/2002	7.83	7.62	0.21	26.61
	9/23/2002	9.02	8.79	0.23	25.43
	12/19/2002	8.48	8.34	0.14	25.90
	3/19/2003	6.91	6.74	0.17	27.50
	6/24/2003	7.79	7.58	0.21	26.65
	9/24/2003	9.06	8.91	0.15	25.33
	12/26/2003	7.51	7.35	0.16	26.89
	3/30/2004	8.00	7.79	0.21	26.44
	6/24/2004	8.65	8.19	0.46	25.99
	9/27/2004	8.65	8.42	0.23	25.80
	12/14/2004	7.62	7.49	0.13	26.75
<b>CR-25</b>	3/7/2005	8.14	7.95	0.19	26.28
	6/22/2005	8.07	7.79	0.28	26.42
	9/19/2005	10.34	9.14	1.20	24.89
	12/12/2005	7.87	7.58	0.29	26.63
	3/13/2006	6.54	6.40	0.14	27.84
	6/26/2006	7.83	7.82	0.01	26.45
	9/25/2006	9.22	9.19	0.03	25.07
	12/11/2006	7.65	NP	-	26.62
	3/19/2007	7.75	6.70	1.05	27.36
	6/18/2007	8.13	7.99	0.14	26.25
	9/17/2007	9.08	9.02	0.06	25.24
	12/17/2007	7.15	NP	-	27.12
	3/24/2008	6.49	6.40	0.09	27.85
	6/23/2008	7.40	7.35	0.05	26.91
	9/22/2008	8.97	8.89	0.08	25.36
	1/5/2009	6.28	6.23	0.05	28.03
	3/16/2009	6.99	6.90	0.09	27.35
	6/15/2009	7.40	7.28	0.12	26.97
	9/14/2009	8.54	8.52	0.02	25.75
	12/21/2009	6.97	6.91	0.06	27.35
	3/16/2010	6.35	6.34	0.01	27.93
	6/21/2010	6.31	6.23	0.08	28.02
	9/20/2010	7.99	7.97	0.02	26.30
	12/15/2010	6.27	6.17	0.10	28.08
	3/21/2011	5.90	5.89	0.01	28.38
	6/8/2011	7.00	6.96	0.04	27.30
	9/26/2011	8.56	8.55	0.01	25.72
	12/12/2011	7.91	7.82	0.09	26.43

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	3/26/2012	6.46	6.39	0.07	27.87
	6/26/2012	7.23	7.15	0.08	27.10
	9/24/2012	8.21	8.2	0.01	26.07
	12/17/2012	16.61	16.6	0.01	17.67
	3/25/2013	6.65	NP	-	27.62
	6/17/2013	7.16	7.13	0.03	27.13
	9/9/2013	8.24	8.21	0.03	26.05
	12/4/2013	7.86	7.82	0.04	26.44
	3/3/2014	7.03	7.00	0.03	27.26
	6/18/2014	7.34	7.32	0.02	26.95
	8/26/2014	8.20	8.19	0.01	26.08
	12/8/2014	7.19	7.18	0.01	27.09
	3/3/2015	7.06	7.05	0.01	27.22
	<b>6/9/2015</b>	<b>7.80</b>	<b>NP</b>	-	<b>26.47</b>
	<b>8/19/2015</b>	<b>8.58</b>	<b>NP</b>	-	<b>25.69</b>
<b>CR-26</b>	9/24/2003	-	-	-	-
(33.19)	12/26/2003	-	-	-	-
	3/26/2004	-	-	-	-
	6/24/2004	20.42	NP	-	12.77
	9/27/2004	21.88	NP	-	11.31
	12/14/2004	22.96	NP	-	-
	3/7/2005	20.81	NP	-	-
	6/22/2005	20.03	NP	-	-
	9/19/2005	22.80	NP	-	-
<b>CR-26</b>	12/12/2005	20.92	NP	-	12.27
	1/30/2006	16.21	NP	-	16.98
	3/13/2006	19.80	NP	-	13.39
	6/26/2006	17.53	NP	-	15.66
	9/25/2006	27.34	NP	-	5.85
	12/11/2006	20.37	NP	-	12.82
	3/19/2007	18.99	NP	-	14.20
(33.21)	6/18/2007	20.00	NP	-	13.21
	9/17/2007	24.46	NP	-	8.75
	12/17/2007	26.09	NP	-	7.12
	1/22/2008	22.90	NP	-	10.31
	3/24/2008	20.31	NP	-	12.90
	6/23/2008	16.89	NP	-	16.32
	9/22/2008	23.70	NP	-	9.51
	1/5/2009	19.38	NP	-	13.83
<b>CR-26</b>	3/16/2009	20.39	NP	-	12.82
	6/15/2009	18.24	NP	-	14.97
	9/14/2009	22.08	NP	-	11.13
	12/21/2009	NM	NM	NM	NM
	3/16/2010	21.06	NP	-	12.15
	6/21/2010	17.60	NP	-	15.61
	9/20/2010	21.70	NP	-	11.51
	12/14/2010	18.01	NP	-	15.20
	3/21/2011	16.55	NP	-	16.66
	6/8/2011	13.11	NP	-	20.10
	9/30/2011	25.75	NP	-	7.46
	12/12/2011	20.68	NP	-	12.53
	3/26/2012	20.12	NP	-	13.09
	6/26/2012	15.39	NP	-	17.82
	9/24/2012	21.38	NP	-	11.83

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	12/17/2012	23.02	NP	-	10.19
	3/25/2013		Inaccessible		
	6/17/2013	21.67	NP	-	11.54
	9/9/2013	24.30	NP	-	8.91
	12/4/2013	22.69	NP	-	10.52
	3/3/2014	19.85	NP	-	13.36
	6/18/2014	19.21	NP	-	14.00
	8/26/2014	22.20	NP	-	11.01
	12/8/2014	19.07	NP	-	14.14
	3/3/2015	19.12	NP	-	14.09
	<b>6/9/2015</b>	<b>21.23</b>	<b>NP</b>	-	<b>11.98</b>
	<b>8/19/2015</b>	<b>21.21</b>	<b>NP</b>	-	<b>12.00</b>
<b>CR-27C</b>	1/30/2006	16.70	NP	-	16.58
(33.28)	3/13/2006	19.46	NP	-	13.82
	9/25/2006	21.94	NP	-	11.34
	12/11/2006	20.48	NP	-	12.80
	3/19/2007	19.26	NP	-	14.02
(33.31)	6/18/2007	19.95	NP	-	13.36
	9/17/2007	22.15	NP	-	11.16
	12/17/2007	20.68	NP	-	12.63
	1/22/2008	20.03	NP	-	13.28
<b>CR-27C</b>	3/24/2008	19.81	NP	-	13.50
	6/23/2008	17.20	NP	-	16.11
	9/22/2008	22.41	NP	-	10.90
	1/5/2009	17.60	NP	-	15.71
	3/16/2009	20.34	NP	-	12.97
	6/15/2009	19.38	NP	-	13.93
	9/14/2009	21.40	NP	-	11.91
	12/21/2009	NM	NM	NM	NM
	3/16/2010	20.53	NP	-	12.78
	6/21/2010	17.42	NP	-	15.89
	9/20/2010	20.23	NP	-	13.08
	12/14/2010	18.40	NP	-	14.91
	3/21/2011	16.63	NP	-	16.68
	6/8/2011	16.02	NP	-	17.29
	9/26/2011	21.53	NP	-	11.78
	12/12/2011	21.12	NP	-	12.19
	3/26/2012	16.29	NP	-	17.02
	6/26/2012		Inaccessible		
	9/24/2012		Inaccessible		
	12/17/2012	17.23	NP	-	16.08
	3/25/2013		Inaccessible		
	6/17/2013	20.08	NP	-	13.23
	9/9/2013	21.50	NP	-	11.81
	12/4/2013	19.79	NP	-	13.52
	3/3/2014	18.55	NP	-	14.76
	6/18/2014	19.09	NP	-	14.22
	8/26/2014	20.12	NP	-	13.19
	12/8/2014	18.75	NP	-	14.56
	3/3/2015	19.52	NP	-	13.79
	<b>6/9/2015</b>	<b>20.51</b>	<b>NP</b>	-	<b>12.80</b>
	<b>8/19/2015</b>	<b>21.24</b>	<b>NP</b>	-	<b>12.07</b>
<b>CR-28A</b>	9/17/2007	NM	NM	NM	NM
(34.90)	12/17/2007	16.07	NP	-	18.83

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	1/22/2008	15.22	NP	-	19.68
	3/24/2008	15.38	NP	-	19.52
	6/23/2008	15.95	NP	-	18.95
	9/22/2008	16.65	NP	-	18.25
	1/5/2009	15.86	NP	-	19.04
	3/16/2009	16.14	NP	-	18.76
	6/15/2009	15.80	NP	-	19.10
	9/14/2009	16.64	NP	-	18.26
	12/21/2009	NM	NM	NM	NM
	3/16/2010	15.55	NP	-	19.35
	6/21/2010	15.35	NP	-	19.55
	9/20/2010	16.28	NP	-	18.62
	12/14/2010	15.35	NP	-	19.55
	3/21/2011	14.52	NP	-	20.38
	6/8/2011	14.89	NP	-	20.01
	9/26/2011	16.19	NP	-	18.71
	12/12/2011	15.94	NP	-	18.96
	3/26/2012	12.35	NP	-	22.55
	6/26/2012	12.02	NP	-	22.88
<b>CR-28A</b>	9/24/2012	16.12	NP	-	18.78
	12/17/2012	15.32	NP	-	19.58
	3/25/2013	14.41	NP	-	20.49
	6/17/2013	15.61	NP	-	19.29
	9/9/2013	16.20	NP	-	18.7
	12/4/2013	16.17	NP	-	18.73
	3/3/2014	15.61	NP	-	19.29
	6/18/2014	15.44	NP	-	19.46
	8/26/2014	16.00	NP	-	18.90
	12/8/2014	15.74	NP	-	19.16
	3/3/2015	15.31	NP	-	19.59
	<b>6/9/2015</b>	<b>15.84</b>	<b>NP</b>	<b>-</b>	<b>19.06</b>
	<b>8/19/2015</b>	<b>16.38</b>	<b>NP</b>	<b>-</b>	<b>18.52</b>
<b>CR-28B</b>	1/30/2006	13.52	NP		21.35
(34.87)	3/13/2006	14.54	NP	-	20.33
	9/25/2006	NM	NM	NM	NM
	12/11/2006	15.39	NP	-	19.48
	3/19/2007	14.81	NP	-	20.06
	6/18/2007	15.26	NP	-	19.61
	9/17/2007	16.72	NP	-	18.15
	12/17/2007	15.37	NP	-	19.50
	1/22/2008	14.78	NP	-	20.09
	3/24/2008	14.76	NP	-	20.11
	6/23/2008	14.05	NP	-	20.82
	9/22/2008	16.02	NP	-	18.85
	1/5/2009	15.78	NP	-	19.09
	3/16/2009	15.80	NP	-	19.07
	6/15/2009	16.04	NP	-	18.83
	9/14/2009	16.08	NP	-	18.79
	12/21/2009	NM	NM	NM	NM
	3/16/2010	14.79	NP	-	20.08
	6/21/2010	13.38	NP	-	21.49
	9/20/2010	15.57	NP	-	19.30
	12/14/2010	15.81	NP	-	19.06
	3/21/2011	12.81	NP	-	22.06

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	6/8/2011	11.89	NP	-	22.98
	9/26/2011	15.02	NP	-	19.85
	12/12/2011	15.15	NP	-	19.72
	3/26/2012	14.93	NP	-	19.94
	6/26/2012	15.22	NP	-	19.65
	9/24/2012	15.50	NP	-	19.37
	12/17/2012	13.63	NP	-	21.24
	3/25/2013	15.5	NP	-	19.37
	6/17/2013	14.07	NP	-	20.80
	9/9/2013	15.18	NP	-	19.69
	12/4/2013	14.82	NP	-	20.05
	3/3/2014	14.02	NP	-	20.85
	6/18/2014	13.85	NP	-	21.02
	8/26/2014	14.92	NP	-	19.95
	12/8/2014	14.05	NP	-	20.82
	3/3/2015	14.18	NP	-	20.69
	<b>6/9/2015</b>	<b>14.79</b>	<b>NP</b>	<b>-</b>	<b>20.08</b>
	<b>8/19/2015</b>	<b>15.11</b>	<b>NP</b>	<b>-</b>	<b>19.76</b>
<b>CR-28C</b>	1/30/2006	13.11	NP		21.65
(34.76)	3/13/2006	14.02	NP	-	20.74
	9/25/2006	NM	NM	NM	NM
	12/11/2006	14.80	NP	-	19.96
	3/19/2007	14.10	NP	-	20.66
(34.75)	6/18/2007	14.54	NP	-	20.21
	9/17/2007	16.39	NP	-	18.36
	12/17/2007	14.63	NP	-	20.12
	1/22/2008	13.96	NP	-	20.79
	3/24/2008	13.98	NP	-	20.77
	6/23/2008	13.46	NP	-	21.29
	9/22/2008	15.52	NP	-	19.23
	1/5/2009	13.30	NP	-	21.45
	3/16/2009	14.16	NP	-	20.59
	6/15/2009	14.23	NP	-	20.52
	9/14/2009	16.18	NP	-	18.57
	12/21/2009	NM	NM	NM	NM
	3/16/2010	13.83	NP	-	20.92
	6/21/2010	12.72	NP	-	22.03
	9/20/2010	14.57	NP	-	20.18
	12/14/2010	12.37	NP	-	22.38
	3/21/2011	11.98	NP	-	22.77
	6/8/2011	11.59	NP	-	23.16
	9/26/2011	14.36	NP	-	20.39
	12/12/2011	14.19	NP	-	20.56
	3/26/2012	13.00	NP	-	21.75
	6/26/2012	12.98	NP	-	21.77
	9/24/2012	14.40	NP	-	20.35
	12/17/2012	12.36	NP	-	22.39
	3/25/2013	13.32	NP	-	21.43
	6/17/2013	13.16	NP	-	21.59
	9/9/2013	14.08	NP	-	20.67
	12/4/2013	13.78	NP	-	20.97
	3/3/2014	13.06	NP	-	21.69
	6/18/2014	12.84	NP	-	21.91
	8/26/2014	13.80	NP	-	20.95

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	12/8/2014	13.15	NP	-	21.60
	3/3/2015	13.33	NP	-	21.42
	<b>6/9/2015</b>	<b>13.78</b>	<b>NP</b>	-	<b>20.97</b>
	<b>8/19/2015</b>	<b>13.99</b>	<b>NP</b>	-	<b>20.76</b>
<b>CR-29A</b>	1/30/2006	13.03	NP	-	21.13
(34.16)	3/13/2006	13.68	NP	-	20.48
	9/25/2006	NM	NM	NM	NM
	12/11/2006	14.50	NP	-	19.66
	3/19/2007	13.91	NP	-	20.25
(34.19)	6/18/2007	14.93	NP	-	19.26
	9/17/2007	15.73	NP	-	18.46
	12/17/2007	14.70	NP	-	19.49
	1/22/2008	13.79	NP	-	20.40
	3/24/2008	14.00	NP	-	20.19
	6/23/2008	14.66	NP	-	19.53
	9/22/2008	15.49	NP	-	18.70
<b>CR-29A</b>	1/5/2009	14.20	NP	-	19.99
	3/16/2009	14.68	NP	-	19.51
	6/15/2009	14.76	NP	-	19.43
	9/14/2009	14.48	NP	-	19.71
	12/21/2009	14.87	NP	-	19.32
	3/16/2010	14.12	NP	-	20.07
	6/21/2010	13.95	NP	-	20.24
	9/20/2010	15.05	NP	-	19.14
	12/14/2010	13.68	NP	-	20.51
	3/21/2011	12.98	NP	-	21.21
	6/8/2011	13.50	NP	-	20.69
	9/26/2011	15.02	NP	-	19.17
	12/12/2011	14.71	NP	-	19.48
	3/26/2012	13.45	NP	-	20.74
	6/26/2012	13.95	NP	-	20.24
	9/24/2012	14.98	NP	-	19.21
	12/17/2012	13.93	NP	-	20.26
	3/25/2013	14.28	NP	-	19.91
	6/17/2013	14.41	NP	-	19.78
	9/9/2013	15.04	NP	-	19.15
	12/4/2013	14.92	NP	-	19.27
	3/3/2014	14.30	NP	-	19.89
	6/18/2014	14.21	NP	-	19.98
	8/26/2014	14.81	NP	-	19.38
	12/8/2014	14.51	NP	-	19.68
	3/3/2015	14.02	NP	-	20.17
	<b>6/9/2015</b>	<b>14.65</b>	<b>NP</b>	-	<b>19.54</b>
	<b>8/19/2015</b>	<b>15.24</b>	<b>NP</b>	-	<b>18.95</b>
<b>CR-29B</b>	1/30/2006	14.46	NP	-	19.85
(34.31)	3/13/2006	NM	NP	-	NM
	9/25/2006	NM	NM	NM	NM
	12/11/2006	15.96	NP	-	18.35
	3/19/2007	15.26	NP	-	19.05
(34.32)	6/18/2007	15.86	NP	-	18.46
	9/17/2007	17.72	NP	-	16.60
	12/17/2007	16.26	NP	-	18.06
	1/22/2008	15.34	NP	-	18.98
	3/24/2008	15.43	NP	-	18.89

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	6/23/2008	14.39	NP	-	19.93
	9/22/2008	17.16	NP	-	17.16
	1/5/2009	14.40	NP	-	19.92
	3/16/2009	16.30	NP	-	18.02
	6/15/2009	15.32	NP	-	19.00
	9/14/2009	17.16	NP	-	17.16
	12/21/2009	16.45	NP	-	17.87
	3/16/2010	16.01	NP	-	18.31
	6/21/2010	14.40	NP	-	19.92
	9/20/2010	15.95	NP	-	18.37
	12/14/2010	14.04	NP	-	20.28
	3/21/2011	13.27	NP	-	21.05
	6/8/2011	12.29	NP	-	22.03
	9/26/2011	16.45	NP	-	17.87
<b>CR-29B</b>	12/12/2011	16.33	NP	-	17.99
	3/26/2012	13.81	NP	-	20.51
	6/26/2012	13.39	NP	-	20.93
	9/24/2012	11.85	NP	-	22.47
	12/17/2012	14.31	NP	-	20.01
	3/25/2013	15.82	NP	-	18.50
	6/17/2013	15.41	NP	-	18.91
	9/9/2013	16.60	NP	-	17.72
	12/4/2013	15.88	NP	-	18.44
	3/3/2014	14.92	NP	-	19.40
	6/18/2014	15.09	NP	-	19.23
	8/26/2014	16.28	NP	-	18.04
	12/8/2014	15.11	NP	-	19.21
	3/3/2015	15.31	NP	-	19.01
	<b>6/9/2015</b>	<b>15.97</b>	<b>NP</b>	-	<b>18.35</b>
	<b>8/19/2015</b>	<b>16.71</b>	<b>NP</b>	-	<b>17.61</b>
<b>CR-30A</b>	1/30/2006	12.10	NP	-	20.96
(33.06)	3/13/2006	12.95	NP	-	20.11
	9/25/2006	NM	NM	NM	NM
	12/11/2006	13.66	NP	-	19.40
	3/19/2007	13.17	NP	-	19.89
(33.08)	6/18/2007	14.15	NP	-	18.93
	9/17/2007	18.91	NP	-	14.17
	12/17/2007	13.81	NP	-	19.27
	1/22/2008	13.00	NP	-	20.08
	3/24/2008	13.21	NP	-	19.87
	6/23/2008	13.86	NP	-	19.22
	9/22/2008	14.67	NP	-	18.41
	1/5/2009	13.11	NP	-	19.97
	3/16/2009	13.72	NP	-	19.36
	6/15/2009	13.96	NP	-	19.12
	9/14/2009	14.65	NP	-	18.43
	12/21/2009	13.89	NP	-	19.19
	3/16/2010	13.29	NP	-	19.79
	6/21/2010	13.32	NP	-	19.76
	9/20/2010	14.20	NP	-	18.88
	12/14/2010	12.69	NP	-	20.39
	3/21/2011	12.22	NP	-	20.86
	6/8/2011	11.14	NP	-	21.94
	9/26/2011	14.24	NP	-	18.84

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	12/12/2011	13.87	NP	-	19.21
	3/26/2012	12.64	NP	-	20.44
	6/26/2012	13.21	NP	-	19.87
	9/24/2012	14.21	NP	-	18.87
	12/17/2012	12.95	NP	-	20.13
	3/25/2013	13.48	NP	-	19.60
	6/17/2013	13.65	NP	-	19.43
	9/9/2013	14.21	NP	-	18.87
	12/4/2013		Inaccessible		
	3/3/2014	13.41	NP	-	19.67
	6/18/2014	13.48	NP	-	19.60
<b>CR-30A</b>	8/26/2014	14.07	NP	-	19.01
	12/8/2014	13.60	NP	-	19.48
	3/3/2015	13.27	NP	-	19.81
	<b>6/9/2015</b>	<b>13.85</b>	<b>NP</b>	-	<b>19.23</b>
	<b>8/19/2015</b>	<b>14.43</b>	<b>NP</b>	-	<b>18.65</b>
<b>CR-30B</b>	1/30/2006	13.97	NP	-	18.33
(32.30)	3/13/2006	16.13	NP	-	16.17
	9/25/2006	NM	NM	NM	NM
	12/11/2006	16.97	NP	-	15.33
	3/19/2007	15.70	NP	-	16.60
(32.33)	6/18/2007	16.73	NP	-	15.60
	9/17/2007	14.88	NP	-	17.45
	12/17/2007	17.15	NP	-	15.18
	1/22/2008	16.43	NP	-	15.90
	3/24/2008	16.39	NP	-	15.94
	6/23/2008	14.45	NP	-	17.88
	9/22/2008	18.74	NP	-	13.59
	1/5/2009	14.55	NP	-	17.78
	3/16/2009	16.89	NP	-	15.44
	6/15/2009	15.99	NP	-	16.34
	9/14/2009	18.54	NP	-	13.79
	12/21/2009	16.80	NP	-	15.53
	3/16/2010	16.95	NP	-	15.38
	6/21/2010	14.39	NP	-	17.94
	9/20/2010	18.16	NP	-	14.17
	12/14/2010	14.86	NP	-	17.47
	3/21/2011	13.71	NP	-	18.62
	6/8/2011	12.52	NP	-	19.81
	9/26/2011	17.48	NP	-	14.85
	12/12/2011	17.52	NP	-	14.81
	3/26/2012	13.66	NP	-	18.67
	6/26/2012	13.33	NP	-	19.00
	9/24/2012	18.22	NP	-	14.11
	12/17/2012	14.50	NP	-	17.83
	3/25/2013	17.06	NP	-	15.27
	6/17/2013	16.51	NP	-	15.82
	9/9/2013	17.96	NP	-	14.37
	12/4/2013	16.63	NP	-	15.70
	3/3/2014	15.57	NP	-	16.76
	6/18/2014	16.05	NP	-	16.28
	8/26/2014	17.42	NP	-	14.91
	12/8/2014	15.82	NP	-	16.51
	3/3/2015	16.45	NP	-	15.88

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	<b>6/9/2015</b>	<b>17.13</b>	<b>NP</b>	-	<b>15.20</b>
	<b>8/19/2015</b>	<b>17.86</b>	<b>NP</b>	-	<b>14.47</b>
<b>CR-31A</b>	1/30/2006	1.30	NP	-	20.26
(21.56)	3/13/2006	2.14	NP	-	19.42
	9/25/2006	NM	NM	NM	NM
	12/11/2006	2.51	NP	-	19.05
	3/19/2007	2.48	NP	-	19.08
(21.58)	6/18/2007	3.37	NP	-	18.21
	9/17/2007	4.02	NP	-	17.56
	12/17/2007	2.94	NP	-	18.64
	1/22/2008	2.30	NP	-	19.28
<b>CR-31A</b>	3/24/2008	2.42	NP	-	19.16
	6/23/2008	2.97	NP	-	18.61
	9/22/2008	3.74	NP	-	17.84
	1/5/2009	2.18	NP	-	19.40
	3/16/2009	2.70	NP	-	18.88
	6/15/2009	3.14	NP	-	18.44
	9/14/2009	3.74	NP	-	17.84
	12/21/2009	2.80	NP	-	18.78
	3/16/2010	2.49	NP	-	19.09
	6/21/2010	2.51	NP	-	19.07
	9/20/2010	3.20	NP	-	18.38
	12/14/2010	1.77	NP	-	19.81
	3/21/2011	1.60	NP	-	19.98
	6/8/2011	1.33	NP	-	20.25
	9/26/2011	3.45	NP	-	18.13
	12/12/2011	3.05	NP	NP	18.53
	3/26/2012	1.92	NP	NP	19.66
	6/26/2012	2.42	NP	-	19.16
	9/24/2012	3.42	NP	-	18.16
	12/17/2012	1.87	NP	-	19.71
	3/25/2013	2.68	NP	-	18.90
	6/17/2013	2.91	NP	-	18.67
	9/9/2013	3.37	NP	-	18.21
	12/4/2013	8.14	NP	-	13.44
	3/3/2014	2.43	NP	-	19.15
	6/18/2014	2.77	NP	-	18.81
	8/26/2014	3.35	NP	-	18.23
	12/8/2014	2.66	NP	-	18.92
	3/3/2015	2.57	NP	-	19.01
	<b>6/9/2015</b>	<b>3.12</b>	<b>NP</b>	-	<b>18.46</b>
	<b>8/19/2015</b>	<b>3.66</b>	<b>NP</b>	-	<b>17.92</b>
<b>CR-31B</b>	1/30/2006	5.06	NP	-	16.63
(21.69)	3/13/2006	7.75	NP	-	13.94
	9/25/2006	NM	NM	NM	NM
	12/11/2006	8.68	NP	-	13.01
	3/19/2007	7.30	NP	-	14.39
(21.70)	6/18/2007	8.37	NP	-	13.33
	9/17/2007	10.96	NP	-	10.74
	12/17/2007	8.80	NP	-	12.90
	1/22/2008	8.37	NP	-	13.33
	3/24/2008	8.22	NP	-	13.48
	6/23/2008	5.54	NP	-	16.16
	9/22/2008	10.73	NP	-	10.97

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	1/5/2009	5.58	NP	-	16.12
	3/16/2009	8.66	NP	-	13.04
	6/15/2009	7.50	NP	-	14.20
	9/14/2009	10.73	NP	-	10.97
	12/21/2009	9.65	NP	-	12.05
	3/16/2010	8.85	NP	-	12.85
	6/21/2010	5.82	NP	-	15.88
	9/20/2010	9.97	NP	-	11.73
	12/14/2010	8.69	NP	-	13.01
<b>CR-31B</b>	3/21/2011	5.04	NP	-	16.66
	6/8/2011	1.35	NP	-	20.35
	9/26/2011	9.34	NP	-	12.36
	12/12/2011	9.44	NP	-	12.26
	3/26/2012	4.75	NP	-	16.95
	6/26/2012	4.23	NP	-	17.47
	9/24/2012	10.45	NP	-	11.25
	12/17/2012	5.50	NP	-	16.20
	3/25/2013	9.06	NP	-	12.64
	6/17/2013	8.51	NP	-	13.19
	9/9/2013	9.88	NP	-	11.82
	12/4/2013	8.25	NP	-	13.45
	3/3/2014	7.06	NP	-	14.64
	6/18/2014	7.72	NP	-	13.98
	8/26/2014	9.26	NP	-	12.44
	12/8/2014	7.31	NP	-	14.39
	3/3/2015	8.31	NP	-	13.39
	<b>6/9/2015</b>	<b>9.08</b>	<b>NP</b>	-	<b>12.62</b>
	<b>8/19/2015</b>	<b>9.74</b>	<b>NP</b>	-	<b>11.96</b>
<b>CR-32A</b>	1/30/2006	1.56	NP	-	20.13
(21.69)	3/13/2006	2.41	NP	-	19.28
	9/25/2006	NM	NM	NM	NM
	12/11/2006	2.96	NP	-	18.73
	3/19/2007	2.74	NP	-	18.95
(21.91)	6/18/2007	3.63	NP	-	18.28
	9/17/2007	4.32	NP	-	17.59
	12/17/2007	3.23	NP	-	18.68
	1/22/2008	2.58	NP	-	19.33
	3/24/2008	2.68	NP	-	19.23
	6/23/2008	3.26	NP	-	18.65
	9/22/2008	4.08	NP	-	17.83
	1/5/2009	2.45	NP	-	19.46
	3/16/2009	2.97	NP	-	18.94
	6/15/2009	3.44	NP	-	18.47
	9/14/2009	4.03	NP	-	17.88
	12/21/2009	NM	NM	NM	NM
	3/16/2010	2.78	NP	-	19.13
	6/21/2010	2.71	NP	-	19.20
	9/20/2010	3.49	NP	-	18.42
	12/14/2010	2.03	NP	-	19.88
	3/21/2011	1.87	NP	-	20.04
	6/8/2011	1.71	NP	-	20.20
	9/26/2011	3.75	NP	-	18.16
	12/12/2011	3.34	NP	-	18.57
	3/26/2012	2.15	NP	-	19.76

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	6/26/2012	2.74	NP	-	19.17
	9/24/2012	3.72	NP	-	18.19
	12/17/2012	2.09	NP	-	19.82
	3/25/2013	2.94	NP	-	18.97
	6/17/2013	3.18	NP	-	18.73
	9/9/2013	3.59	NP	-	18.32
	12/4/2013	3.41	NP	-	18.50
<b>CR-32A</b>	3/3/2014	2.67	NP	-	19.24
	6/18/2014	3.03	NP	-	18.88
	8/26/2014	3.61	NP	-	18.30
	12/8/2014	2.88	NP	-	19.03
	3/3/2015	2.88	NP	-	19.03
	<b>6/9/2015</b>	<b>3.39</b>	<b>NP</b>	-	<b>18.52</b>
	<b>8/19/2015</b>	<b>3.91</b>	<b>NP</b>	-	<b>18.00</b>
<b>CR-32B</b>	1/30/2006	5.34	NP	-	16.68
(22.02)	3/13/2006	7.99	NP	-	14.03
	9/25/2006	NM	NM	NM	NM
	12/11/2006	8.69	NP	-	13.33
	3/19/2007	7.41	NP	-	14.61
	6/18/2007	8.39	NP	-	13.63
	9/17/2007	10.44	NP	-	11.58
(22.08)	12/17/2007	8.84	NP	-	13.24
	1/22/2008	8.42	NP	-	13.66
	3/24/2008	8.22	NP	-	13.86
	6/23/2008	5.72	NP	-	16.36
	9/22/2008	10.47	NP	-	11.61
	1/5/2009	6.03	NP	-	16.05
	3/16/2009	8.73	NP	-	13.35
	6/15/2009	7.92	NP	-	14.16
	9/14/2009	10.40	NP	-	11.68
	12/21/2009	NM	NM	NM	NM
	3/16/2010	8.85	NP	-	13.23
	6/21/2010	5.73	NP	-	16.35
	9/20/2010	9.54	NP	-	12.54
	12/14/2010	9.74	NP	-	12.34
	3/21/2011	5.31	NP	-	16.77
	6/8/2011	2.81	NP	-	19.27
	9/26/2011	8.63	NP	-	13.45
	12/12/2011	9.37	NP	-	12.71
	3/26/2012	5.38	NP	-	16.70
	6/26/2012	4.75	NP	-	17.33
	9/24/2012	10.23	NP	-	11.85
	12/17/2012	6.03	NP	-	16.05
	3/25/2013	8.56	NP	-	13.52
	6/17/2013	8.51	NP	-	13.57
	9/9/2013	9.60	NP	-	12.48
	12/4/2013	8.51	NP	-	13.57
	3/3/2014	7.31	NP	-	14.77
	6/18/2014	7.34	NP	-	14.74
	8/26/2014	9.33	NP	-	12.75
	12/8/2014	9.32	NP	-	12.76
	3/3/2015	8.62	NP	-	13.46
	<b>6/9/2015</b>	<b>9.00</b>	<b>NP</b>	-	<b>13.08</b>
	<b>8/19/2015</b>	<b>9.79</b>	<b>NP</b>	-	<b>12.29</b>

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

<b>CR-32C</b>	1/30/2006	5.38	NP	-	16.42
(21.80)	3/13/2006	8.75	NP	-	13.05
	9/25/2006	NM	NM	NM	NM
	12/11/2006	9.17	NP	-	12.63
	3/19/2007	7.75	NP	-	14.05
(21.76)	6/18/2007	8.94	NP	-	12.82
	9/17/2007	11.38	NP	-	10.38
<b>CR-32C</b>	10/9/2007	NM	NP	-	NM
			NP	-	21.76
	12/17/2007	9.20	NP	-	12.56
	1/22/2008	8.97	NP	-	12.79
	3/24/2008	8.77	NP	-	12.99
	6/23/2008	7.86	NP	-	13.90
	9/22/2008	11.38	NP	-	10.38
	1/5/2009	5.86	NP	-	15.90
	3/16/2009	9.20	NP	-	12.56
	6/15/2009	7.90	NP	-	13.86
	9/14/2009	10.50	NP	-	11.26
	12/21/2009	NM	NM	NM	NM
	3/16/2010	9.48	NP	-	12.28
	6/21/2010	6.24	NP	-	15.52
	9/20/2010	10.58	NP	-	11.18
	12/14/2010	9.81	NP	-	11.95
	3/21/2011	5.43	NP	-	16.33
	6/8/2011	0.85	NP	-	20.91
	9/26/2011	10.56	NP	-	11.20
	12/12/2011	10.05	NP	-	11.71
	3/26/2012	4.97	NP	-	16.79
	6/26/2012	4.42	NP	-	17.34
	9/24/2012	11.23	NP	-	10.53
	12/17/2012	6.03	NP	-	15.73
	3/25/2013	9.66	NP	-	12.10
	6/17/2013	9.07	NP	-	12.69
	9/9/2013	10.36	NP	-	11.40
	12/4/2013	5.45	NP	-	16.31
	3/3/2014	7.25	NP	-	14.51
	6/18/2014	8.16	NP	-	13.60
	8/26/2014	9.67	NP	-	12.09
	12/8/2014	7.48	NP	-	14.28
	3/3/2015	8.85	NP	-	12.91
	<b>6/9/2015</b>	<b>9.71</b>	<b>NP</b>	-	<b>12.05</b>
	<b>8/19/2015</b>	<b>10.14</b>	<b>NP</b>	-	<b>11.62</b>
<b>CR-33</b>	12/17/2007	5.96	NP	-	10.90
(16.86)	1/22/2008	7.12	NP	-	9.74
	3/24/2008	5.94	NP	-	10.92
	6/23/2008	3.00	NP	-	13.86
	9/22/2008	7.01	NP	-	9.85
	1/5/2009	4.69	NP	-	12.17
	3/16/2009	6.23	NP	-	10.63
	6/15/2009	4.67	NP	-	12.19
	9/14/2009	6.45	NP	-	10.41
	12/21/2009	5.73	NP	-	11.13
	3/16/2010	7.56	NP	-	9.30
	6/21/2010	3.62	NP	-	13.24

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	9/20/2010	6.07	NP	-	10.79
	12/14/2010	4.07	NP	-	12.79
	3/21/2011	3.33	NP	-	13.53
	6/8/2011	NM	NM	NM	NM
	9/26/2011	6.14	NP	-	10.72
<b>CR-33</b>	12/12/2011	6.98	NP	-	9.88
	3/26/2012	3.06	NP	-	13.80
	6/26/2012	Inaccessible			
	9/24/2012	6.15	NP	-	10.71
	12/17/2012	3.78	NP	-	13.08
	3/25/2013	6.62	NP	-	10.24
	6/17/2013	5.39	NP	-	11.47
	9/9/2013	9.02	NP	-	7.84
	12/4/2013	5.76	NP	-	11.10
	3/3/2014	4.88	NP	-	11.98
	6/18/2014	4.81	NP	-	12.05
	8/26/2014	6.77	NP	-	10.09
	12/8/2014	5.01	NP	-	11.85
	3/3/2015	6.08	NP	-	10.78
	<b>6/9/2015</b>	<b>5.94</b>	<b>NP</b>	-	<b>10.92</b>
	<b>8/19/2015</b>	<b>6.12</b>	<b>NP</b>	-	<b>10.74</b>
<b>CR-34-1</b>	6/26/2012	15.62	NP	-	19.62
<b>(35.24)</b>	9/24/2012	16.42	NP	-	18.82
	12/17/2012	15.73	NP	-	19.51
	3/25/2013	15.91	NP	-	19.33
	6/17/2013	16.00	NP	-	19.24
	9/9/2013	16.58	NP	-	18.66
	12/4/2013	16.60	NP	-	18.64
	3/3/2014	15.99	NP	-	19.25
	6/18/2014	15.84	NP	-	19.40
	8/26/2014	16.42	NP	-	18.82
	12/8/2014	16.15	NP	-	19.09
	3/3/2015	15.73	NP	-	19.51
	<b>6/9/2015</b>	<b>16.24</b>	<b>NP</b>	-	<b>19.00</b>
	<b>8/19/2015</b>	<b>16.76</b>	<b>NP</b>	-	<b>18.48</b>
<b>CR-34-2</b>	6/26/2012	15.64	NP	-	19.62
<b>(35.26)</b>	9/24/2012	16.53	NP	-	18.73
	12/17/2012	15.75	NP	-	19.51
	3/25/2013	15.91	NP	-	19.35
	6/17/2013	16.04	NP	-	19.22
	9/9/2013	16.59	NP	-	18.67
	12/4/2013	16.56	NP	-	18.70
	3/3/2014	16.01	NP	-	19.25
	6/18/2014	15.87	NP	-	19.39
	8/26/2014	16.39	NP	-	18.87
	12/8/2014	16.13	NP	-	19.13
	3/3/2015	15.73	NP	-	19.53
	<b>6/9/2015</b>	<b>16.27</b>	<b>NP</b>	-	<b>18.99</b>
	<b>8/19/2015</b>	<b>16.76</b>	<b>NP</b>	-	<b>18.50</b>
<b>CR-35-1</b>	6/26/2012	16.14	NP	-	19.66
<b>(35.8)</b>	9/24/2012	17.01	NP	-	18.79
	12/17/2012	16.23	NP	-	19.57
	3/25/2013	16.42	NP	-	19.38
	6/17/2013	16.52	NP	-	19.28

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	9/9/2013	17.10	NP	-	18.70
	12/4/2013	17.07	NP	-	18.73
	3/3/2014	16.51	NP	-	19.29
	6/18/2014	16.34	NP	-	19.46
	8/26/2014	16.90	NP	-	18.90
	12/8/2014	16.66	NP	-	19.14
	3/3/2015	16.22	NP	-	19.58
	<b>6/9/2015</b>	<b>16.76</b>	<b>NP</b>	-	<b>19.04</b>
	<b>8/19/2015</b>	<b>17.26</b>	<b>NP</b>	-	<b>18.54</b>
<b>CR-35-2</b>	6/26/2012	16.22	NP	-	19.66
(35.88)	9/24/2012	17.11	NP	-	18.77
	12/17/2012	16.32	NP	-	19.56
	3/25/2013	16.49	NP	-	19.39
	6/17/2013	16.61	NP	-	19.27
	9/9/2013	17.17	NP	-	18.71
	12/4/2013	17.14	NP	-	18.74
<b>CR-35-2</b>	3/3/2014	16.59	NP	-	19.29
	6/18/2014	16.42	NP	-	19.46
	8/26/2014	16.98	NP	-	18.90
	12/8/2014	16.73	NP	-	19.15
	3/3/2015	16.30	NP	-	19.58
	<b>6/9/2015</b>	<b>16.82</b>	<b>NP</b>	-	<b>19.06</b>
	<b>8/19/2015</b>	<b>17.33</b>	<b>NP</b>	-	<b>18.55</b>
<b>GPW-1</b>	12/12/2000	12.99	NP	-	21.67
(34.66)	2/20/2001	12.59	NP	-	22.07
	4/3/2001	12.56	NP	-	22.10
	6/8/2001	NM	NM	NM	NM
	7/16/2001	12.70	NP	-	21.96
	9/19/2001	13.15	NP	-	21.51
	12/22/2001	NM	NM	-	NM
	3/15/2002	7.46	NP	-	27.20
	6/4/2002	11.71	NP	-	22.95
	9/23/2002	12.95	NP	-	21.71
	12/19/2002	12.71	NP	-	21.95
	3/19/2003	7.19	NP	-	27.47
	6/24/2003	10.06	NP	-	24.60
	9/24/2003	13.07	NP	-	21.59
	12/26/2003	11.01	NP	-	23.65
	3/30/2004	7.61	NP	-	27.05
	6/24/2004	12.36	NP	-	22.30
	9/27/2004	12.99	NP	-	21.67
	12/14/2004	12.93	NP	-	21.73
	3/7/2005	11.52	NP	-	23.14
	6/21/2005	9.65	NP	-	25.01
	9/19/2005	13.01	NP	-	21.65
	12/12/2005	8.75	NP	-	25.91
	3/13/2006	7.60	NP	-	27.06
	6/26/2006	NM	NM	NM	NM
	9/25/2006	12.89	NP	-	21.77
	12/11/2006	7.21	NP	-	27.45
	3/19/2007	7.04	NP	-	27.62
	6/18/2007	12.19	NP	-	22.47
	9/17/2007	13.31	NP	-	21.35
	12/17/2007	7.88	NP	-	26.78

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	3/24/2008	7.92	NP	-	26.74
	6/23/2008	11.74	NP	-	22.92
	9/22/2008	7.90	NP	-	26.76
	1/5/2009	6.89	NP	-	27.77
	3/16/2009	9.43	9.42	0.01	25.24
	6/15/2009	11.09	NP	-	23.57
	9/14/2009			Inaccessible	
<b>GPW-1</b>	12/21/2009			Inaccessible	
	3/16/2010	7.15	NP	-	27.51
	6/21/2010	7.37	NP	-	27.29
	9/20/2010	12.42	NP	-	22.24
	12/15/2010			Inaccessible	
	3/21/2011	6.91	NP	-	27.75
	6/8/2011	9.88	NP	-	24.78
	9/26/2011	12.56	NP	-	22.10
	12/12/2011	11.46	NP	NP	23.20
	3/26/2012			Inaccessible	
	6/26/2012			Inaccessible	
	9/24/2012	12.55			22.11
	12/17/2012	6.58	NP	-	28.08
	3/25/2013	9.58	NP	-	25.08
	6/17/2013	9.29	NP	-	25.37
	9/9/2013			Inaccessible	
	12/4/2013	11.16	NP	-	23.50
	3/3/2014	NM	NM	NM	NM
	6/18/2014	11.25	NP	-	23.41
	8/26/2014	12.42	NP	-	22.24
	12/8/2014	7.04	NP	-	27.62
	3/3/2015	10.73	NP	-	23.93
	<b>6/9/2015</b>	<b>12.30</b>	<b>NP</b>	-	<b>22.36</b>
	<b>8/19/2015</b>	<b>12.96</b>	<b>NP</b>	-	<b>21.70</b>
<b>GPW-2</b>	12/12/2000	NM	NM	NM	NM
(34.98)	2/20/2001	10.93	10.68	0.25	24.25
	4/3/2001	NM	NM	NM	NM
	6/8/2001	NM	NM	NM	NM
	7/16/2001	NM	NM	NM	NM
	9/19/2001	12.91	NP	-	22.07
	12/22/2001	NM	NM	-	NM
	3/15/2002	7.91	NP	-	27.07
	6/4/2002	NM	NM	1.2E	NM
	9/23/2002	13.10E	12.97E	0.13E	E
	12/19/2002	12.32	-	-	-
	3/19/2003	9.4E	-	-	-
	6/24/2003	10.20	NM	Sheen	24.78
	9/24/2003	12.18	11.93	0.25E	23.00
	12/26/2003	10.80	10.55	0.25	24.38
	3/30/2004	9.31	8.92	0.39	25.98
	6/24/2004	10.75	10.73	0.02	24.25
	9/27/2004	12.55	11.83	0.72	23.01
	12/14/2004	12.55	11.94	0.61	22.92
	3/7/2005	10.76	10.75	0.01	24.23
	6/20/2005	10.18	NP	-	24.80
	9/19/2005	12.18	11.35	0.83	23.46
	12/12/2005	9.90	9.90	Sheen	25.08

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	3/13/2006	9.34	9.34	Sheen	25.64
	6/26/2006	10.77	10.77	Sheen	24.21
	9/25/2006	11.88	11.88	Sheen	23.10
	12/11/2006	9.59	NP	-	25.39
	3/19/2007	9.02	9.00	0.02	25.98
<b>GPW-2</b>	6/18/2007	11.85	11.08	0.77	23.75
	9/17/2007	12.44	12.28	0.16	22.67
	12/17/2007	9.29	NP	-	25.69
	3/24/2008	10.01	9.54	0.47	25.35
	6/23/2008	10.96	10.84	0.12	24.12
	9/22/2008	12.20	12.02	0.18	22.92
	1/5/2009	8.24	8.23	0.01	26.75
	3/16/2009	10.85	10.51	0.34	24.40
	6/15/2009	10.55	NP	-	24.43
	9/14/2009	11.76	NP	-	23.22
	12/21/2009	9.98	9.93	0.05	25.04
	3/16/2010	8.54	8.53	0.01	26.45
	6/21/2010	8.23	NP	-	26.75
	9/20/2010	11.52	11.20	0.32	23.72
	12/15/2010	7.75	7.75	Sheen	27.23
	3/21/2011	7.59	NP	-	27.39
	6/8/2011	9.76	9.75	0.01	25.23
	9/26/2011	11.46	11.41	0.05	23.56
	12/12/2011	10.26	10.16	0.10	24.80
	3/26/2012	7.46	NP	NP	27.52
	6/26/2012	9.81	9.71	0.10	25.25
	9/24/2012	11.39	11.38	0.01	23.60
	12/17/2012	6.82	NP	-	28.16
	3/25/2013	8.95	8.89	0.06	26.08
	6/17/2013	7.71	NP	-	27.27
	9/9/2013	11.16	NP	-	23.82
	12/4/2013	8.51	8.40	0.11	26.56
	3/3/2014	NM	NM	NM	NM
	6/18/2014	9.87	9.86	0.01	25.12
	8/26/2014	Inaccessible			
	12/8/2014	7.59	NP	-	27.39
	3/3/2015	7.69	7.68	0.01	27.29
	<b>6/9/2015</b>	<b>10.31</b>	<b>10.31</b>	-	<b>24.67</b>
	<b>8/19/2015</b>	<b>11.49</b>	<b>NP</b>	-	<b>23.49</b>
<b>GPW-3</b>	12/12/2000	12.23	NP	-	22.85
(35.08)	2/20/2001	12.03	NP	-	23.05
	4/3/2001	11.97	NP	-	23.11
	6/8/2001	NM	NM	NM	NM
	7/16/2001	12.16	NP	-	22.92
	9/19/2001	12.66	NP	-	22.42
	12/22/2001	NM	NM	NM	NM
	3/15/2002	10.46	NP	-	24.62
	6/4/2002	11.22	NP	-	23.86
	9/23/2002	11.72	NP	-	23.36
	12/19/2002	12.20	-	-	-
	3/19/2003	10.86E	-	-	-
	6/24/2003	11.35	11.24	0.11	23.82
	9/24/2003	11.90	11.78	0.12	23.28
	12/26/2003	13.49	11.24	2.25	23.39

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**

Chevron - Willbridge Terminal  
 Portland, Oregon

	3/30/2004	11.73	10.90	0.83	24.01
	6/24/2004	11.83	11.59	0.24	23.44
	9/27/2004	12.32	11.86	0.46	23.13
<b>GPW-3</b>	12/14/2004	12.15	11.87	0.28	23.15
	3/7/2005	11.81	11.60	0.21	23.44
	6/21/2005	11.35	11.16	0.19	23.88
	9/19/2005	11.98	11.85	0.13	23.20
	12/12/2005	11.27	11.21	0.06	23.86
	3/13/2006	10.82	10.80	0.02	24.28
	6/26/2006	11.16	11.16	Sheen	23.92
	9/25/2006	11.88	11.88	sheen	23.20
	12/11/2006	7.85	7.81	0.04	27.26
	3/19/2007	10.57	NP	-	24.51
	6/18/2007	11.47	NP	-	23.61
	9/17/2007	12.05	NP	-	23.03
	12/17/2007	10.97	NP	-	24.11
	3/24/2008	10.92	10.91	0.01	24.17
	6/23/2008	11.33	-	-	23.75
	9/22/2008	11.89	11.88	0.01	23.20
	1/5/2009	10.94	10.85	0.09	24.21
	3/16/2009	11.20	NP	-	23.88
	6/15/2009	11.13	NP	-	23.95
	9/14/2009	11.76	NP	-	23.32
	12/21/2009	11.00	NP	-	24.08
	3/16/2010	10.59	10.58	0.01	24.50
	6/21/2010	10.26	10.25	0.01	24.83
	9/20/2010	11.49	NP	-	23.59
	12/15/2010	10.31	10.29	0.02	24.79
	3/21/2011	9.90	NP	-	25.18
	6/8/2011	10.65	NP	-	24.43
	9/26/2011	11.60	NP	-	23.48
	12/12/2011	11.16	NP	-	23.92
	3/26/2012	10.15	NP	-	24.93
	6/26/2012	10.71	NP	-	24.37
	9/24/2012	11.69	NP	-	23.39
	12/17/2012	9.90	9.89	0.01	25.19
	3/25/2013	10.89	NP	-	24.19
	6/17/2013	10.53	NP	-	24.55
	9/9/2013	11.45	NP	-	23.63
	12/4/2013	11.06	NP	-	24.02
	3/3/2014	NM	NM	NM	NM
	6/18/2014	10.78	NP	-	24.30
	8/26/2014	12.32	NP	-	22.76
	12/8/2014	10.49	10.15	0.34	24.86
	3/3/2015	10.38	10.38	0.00	24.70
	<b>6/9/2015</b>	<b>11.18</b>	<b>NP</b>	-	<b>23.90</b>
	<b>8/19/2015</b>	<b>11.55</b>	<b>NP</b>	-	<b>23.53</b>
<b>GPW-4</b>	12/12/2000	NM	NM	NM	NM
(35.07)	2/20/2001	12.29	NP	-	22.78
	4/3/2001	NM	NM	NM	NM
	6/8/2001	NM	NM	NM	NM
	7/16/2001	NM	NM	NM	NM
	9/19/2001	13.02	NP	-	22.05
	12/22/2001	NM	NM	NM	NM

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

<b>GPW-4</b>	3/15/2002	11.08	NP	-	23.99
	6/4/2002	11.98	NP	-	23.09
	9/23/2002	12.71	NP	-	22.36
	12/19/2002	12.23	NP	-	22.84
	3/19/2003	11.30	NP	-	23.77
	6/24/2003	12.12	NP	-	22.95
	9/24/2003	13.11	13.07	0.04	21.99
	12/26/2003	12.10	NP	-	22.97
	3/30/2004	12.34	11.78	0.56	23.18
	6/24/2004	12.57	NP	-	22.50
	9/27/2004	12.58	NP	-	22.49
	12/14/2004	12.38	NP	-	22.69
	3/7/2005	12.32	NP	-	22.75
	6/20/2005	12.02	NP	-	23.05
	9/19/2005	12.95	12.93	0.02	22.14
	12/12/2005	11.89	NP	-	23.18
	3/13/2006	11.27	NP	-	23.80
	6/26/2006	11.96	NP	-	23.11
	9/25/2006	13.05	13.05	sheen	22.02
	12/11/2006	11.70	NP	-	23.37
	3/19/2007	11.16	NP	-	23.91
	6/18/2007	12.21	NP	-	22.86
	9/17/2007	13.22	NP	-	21.85
	12/17/2007	11.68	NP	-	23.39
	3/24/2008	11.26	11.24	0.02	23.83
	6/23/2008	12.01	12.01	sheen	23.06
	9/22/2008	12.87	12.78	0.09	22.27
	1/5/2009	NM	NM	NM	NM
	3/16/2009	11.90	11.81	0.09	23.24
	6/15/2009	11.85	11.76	0.09	23.29
	9/14/2009	12.79	12.75	0.04	22.31
	12/21/2009	11.53	11.48	0.05	23.58
	3/16/2010	10.20	10.17	0.03	24.89
	6/21/2010	NM	NM	NM	NM
	9/20/2010	12.49	NP	-	22.58
	12/15/2010	10.74	10.74	sheen	24.33
	3/21/2011	10.17	NP	-	24.90
	6/8/2011	11.02	11.01	0.01	24.06
	9/26/2011	12.38	12.35	0.03	22.71
	12/12/2011	11.79	11.75	0.04	23.31
	3/26/2012	12.40	NP	NP	22.67
	6/26/2012	11.14	11.03	0.11	24.02
	9/24/2012	12.29	NP	-	22.78
	12/17/2012	10.45	10.42	0.03	24.64
	3/25/2013	11.24	11.2	0.04	23.86
	6/17/2013	11.22	11.16	0.06	23.90
	9/9/2013	12.06	12.05	0.01	23.02
	12/4/2013	12.01	11.97	0.04	23.09
	3/3/2014	NM	NM	NM	NM
	6/18/2014	11.52	11.41	0.11	23.64
<b>GPW-4</b>	8/26/2014	12.19	12.08	0.11	22.97
	12/8/2014	11.32	11.21	0.11	23.84
	3/3/2015	11.23	11.12	0.11	23.93
(34.07)	<b>6/9/2015</b>	<b>11.99</b>	<b>11.91</b>	<b>0.08</b>	<b>22.08</b>

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	<b>8/19/2015</b>	<b>12.51</b>	<b>12.42</b>	<b>0.09</b>	<b>21.56</b>
<b>GPW-5</b>	12/12/2000	NM	NM	NM	NM
(34.85)	2/20/2001	12.02	NP	-	22.83
	4/3/2001	NM	NM	NM	NM
	6/8/2001	NM	NM	NM	NM
	7/16/2001	NM	NM	NM	NM
	9/19/2001	12.79	NP	-	22.06
	12/22/2001	NM	NM	-	NM
	3/15/2002	10.72	NP	-	24.13
	6/4/2002	11.66	NP	-	23.19
	9/23/2002	12.46	NP	-	22.39
	12/19/2002	11.96	NP	-	22.89
	3/19/2003	10.97	NP	-	23.88
	6/24/2003	11.80	NP	-	23.05
	9/24/2003	12.92	NP	-	21.93
	12/26/2003	11.64	NP	-	23.21
	3/30/2004	11.57	NP	-	23.28
	6/24/2004	12.21	NP	-	22.64
	9/27/2004	12.21	NP	-	22.64
	12/14/2004	12.05	NP	-	22.80
	3/7/2005	12.04	NP	-	22.81
	6/20/2005	11.72	NP	-	23.13
	9/19/2005	12.70	NP	-	22.15
	12/12/2005	11.56	NP	-	23.29
	3/13/2006	10.84	NP	-	24.01
	6/26/2006	11.68	NP	-	23.17
	9/25/2006	12.81	NP	-	22.04
	12/11/2006	11.42	11.42	sheen	23.43
	3/19/2007	NM	NM	NM	NM
	6/18/2007	11.86	NP	-	22.99
	9/17/2007	12.82	NP	-	22.03
	12/17/2007	11.29	NP	-	23.56
	3/24/2008	10.78	NP	-	24.07
	6/23/2008	11.58	NP	-	23.27
	9/22/2008	12.55	NP	-	22.30
	1/5/2009	NM	NM	NM	NM
	3/16/2009	11.42	NP	-	23.43
	6/15/2009		Inaccessible		
	9/14/2009	12.39	NP	-	22.46
	12/21/2009	11.25	11.24	0.01	23.61
	3/16/2010	NM	NM	NM	NM
	6/21/2010	10.27	NP	-	24.58
	9/20/2010	12.06	NP	-	22.79
	12/15/2010	10.29	NP	-	24.56
	3/21/2011	9.74	NP	-	25.11
	6/8/2011	10.67	NP	-	24.18
	9/26/2011	12.12	NP	-	22.73
<b>GPW-5</b>	12/12/2011	NM	NP	-	NM
	3/26/2012		Inaccessible		
	6/26/2012	10.74	NP	-	24.11
	9/24/2012		Inaccessible		
	12/17/2012	10.10	NP	-	24.75
	3/25/2013	10.90	NP	-	23.95
	6/17/2013		Inaccessible		

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	9/9/2013	Inaccessible			
	12/4/2013	Inaccessible			
	3/3/2014	Inaccessible			
	6/18/2014	Inaccessible			
	8/26/2014	Inaccessible			
	12/8/2014	10.92	NP	-	23.93
	3/3/2015	10.89	NP	-	23.96
	<b>6/9/2015</b>	<b>11.81</b>	<b>NP</b>	-	<b>23.04</b>
	<b>8/19/2015</b>	<b>12.30</b>	<b>NP</b>	-	<b>22.55</b>
<b>EX-1</b>	2/14/2000	15.55	NP	-	18.60
(34.15)	5/22/2000	18.29	NP	-	15.86
	8/22/2000	16.56	NP	-	17.59
	11/27/2000	16.86	NP	-	17.29
	2/20/2001	16.66	NP	-	17.49
	5/15/2001	16.62	NP	-	17.53
	9/19/2001	Covered by Facility Equipment			
	12/22/2001	Covered by Facility Equipment			
	3/15/2002	15.34	NP	-	18.81
	9/23/2002	16.88	NP	-	17.27
	12/19/2002	16.99	NP	-	17.16
	3/19/2003	15.65	NP	-	18.50
	6/24/2003	15.98	NP	-	18.17
	9/24/2003	Could Not Access			
	12/26/2003	Could Not Access			
	3/30/2004	Could Not Access			
	6/24/2004	16.35	NP	-	17.80
	9/27/2004	Could Not Access			
	12/14/2004	16.66	NP	-	17.49
	3/7/2005	16.52	NP	-	17.63
	6/20/2005	16.20	NP	-	17.95
	9/19/2005	16.86	NP	-	17.29
	12/12/2005	16.19	NP	-	17.96
	3/13/2006	15.03	NP	-	19.12
	6/26/2006	15.86	NP	-	18.29
	9/25/2006	16.23	NP	-	17.92
	12/11/2006	15.43	NP	-	18.72
	3/19/2007	14.98	NP	-	19.17
(34.35)	6/18/2007	15.82	NP	-	18.53
	9/17/2007	16.45	16.45	sheen	17.90
	12/17/2007	15.62	NP	-	18.73
	1/22/2008	14.94	NP	-	19.41
	3/24/2008	15.02	NP	-	19.33
	6/23/2008	15.50	NP	-	18.85

**TABLE 1A**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Chevron - Willbridge Terminal  
 Portland, Oregon

	9/22/2008	16.19	NP	-	18.16
	1/5/2009	15.21	NP	-	19.14
<b>EX-1</b>	3/16/2009	15.50	NP	-	18.85
	6/15/2009	15.63	NP	-	18.72
	9/14/2009	16.04	NP	-	18.31
	12/21/2009	15.58	NP	-	18.77
	3/16/2010	15.14	NP	-	19.21
	6/21/2010	15.94	NP	-	18.41
	9/20/2010	13.75	NP	-	20.60
	12/14/2010	NM	NM	NM	NM
	3/21/2011	14.21	NP	-	20.14
	6/8/2011	NM	NM	NM	NM
	9/26/2011	15.79	NP	-	18.56
	12/12/2011	15.43	NP	-	18.92
	3/26/2012	14.60	NP	-	19.75
	6/26/2012		Inaccessible		
	9/24/2012		Inaccessible		
	12/17/2012	14.79	NP	-	19.56
	3/25/2013		Inaccessible		
	6/17/2013	15.17	NP	-	19.18
	9/9/2013	15.68	NP	-	18.67
	12/4/2013	15.63	NP	-	18.72
	3/3/2014	14.99	NP	-	19.36
	6/18/2014	15.06	NP	-	19.29
	8/26/2014		Inaccessible		
<b>EX-1</b>	12/8/2014	15.13	NP	-	19.22
	3/3/2015	14.93	NP	-	19.42
	<b>6/9/2015</b>	<b>15.43</b>	<b>NP</b>	-	<b>18.92</b>
	<b>8/19/2015</b>	<b>15.80</b>	<b>NP</b>	-	<b>18.55</b>

**NOTES:**

Survey information obtained from Chase, Jones and Associates December 29, 1998

"Well and Boring Location" survey, or from SAIC's groundwater elevation tables  
 where not otherwise available.

Survey information is relative to City of Portland Datum.

Data collected prior to 4Q11 are presented as they were reported by previous consultants

Wells B-8 and B-31 were abandoned after first quarter 2000

SPH = Separate phase hydrocarbons

DTW = Depth to water

DTP = Depth to product (SPH)

TOC = Top of casing original surveyed elevation and subsequent re-surveyed elevations

Sheen = Unmeasureable SPH less than 0.01 feet thick

NP = No measurable product

NA = Not applicable

NM = Not measured

NR = None recovered

\* = SPH recovered for latest quarter monitored

\*\* = Well contains an absorbant sock for SPH recovery

\*\*\* = Product recovery conducted as part of Chevron ethanol study

^ = Well modified during recent construction activities. Elevation presented calculated using  
 TOC elevation at time of gauging

E = 3/4 inch-diameter well/ SPH thickness estimated with bailer

- = No measurable product thickness

GWE = TOC -(DTW - (0.8 x DTP - DTW)), where 0.8 used as density of the SPH

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-1</b>	2/14/2000	3.76	NP	-	31.67
(35.43)	5/22/2000	4.72	NP	-	30.71
	8/23/2000	7.52	NP	-	27.91
	11/28/2000	7.43	NP	-	28.00
	2/21/2001	6.32	NP	-	29.11
	5/15/2001	6.33	NP	-	29.10
	9/19/2001	8.40	NP	-	27.03
	12/19/2001	3.92	NP	-	31.51
	3/13/2002	3.80	NP	-	31.63
	6/24/2002	6.56	NP	-	28.87
	9/26/2002	8.15	NP	-	27.28
	12/20/2002	5.32	NP	-	30.11
	3/17/2003	3.81	NP	-	31.62
	6/26/2003	6.19	NP	-	29.24
	9/24/2003	8.04	NP	-	27.39
	12/30/2003	4.02	NP	-	31.41
	3/29/2004	4.45	NP	-	30.98
	6/29/2004	6.84	NP	-	28.59
	9/27/2004	7.32	NP	-	28.11
	12/14/2004	5.31	NP	-	30.12
	3/7/2005	6.81	NP	-	28.62
	6/20/2005	5.60	NP	-	29.83
	9/19/2005	7.62	NP	-	27.81
	12/12/2005	4.99	NP	-	30.44
	3/13/2006	3.60	NP	-	31.83
	6/27/2006	5.49	NP	-	29.94
	9/25/2006	7.53	NP	-	27.90
	12/11/2006	4.48	NP	-	30.95
	3/19/2007	4.05	NP	-	31.38
	4/20/2007	4.29	NP	-	31.14
	6/18/2007	5.85	NP	-	29.58
	9/17/2007	7.60	NP	-	27.83
	12/17/2007	4.74	NP	-	30.69
	3/24/2008	3.78	NP	-	31.65
	6/23/2008	5.53	NP	-	29.90
	9/22/2008	7.41	NP	-	28.02
	1/5/2009	3.64	NP	-	31.79
	3/16/2009	4.77	NP	-	30.66
	6/15/2009	5.28	NP	-	30.15
	9/14/2009	6.91	NP	-	28.52
	12/21/2009	4.45	NP	-	30.98
	3/16/2010	3.71	NP	-	31.72
	6/21/2010	3.79	NP	-	31.64
	9/20/2010	5.71	NP	-	29.72
	12/14/2010	2.74	NP	-	32.69
	3/21/2011	2.75	NP	-	32.68
	6/8/2011	4.80	NP	-	30.63
	9/26/2011	6.33	NP	-	29.10

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-1</b>	12/12/2011	5.25	NP	-	30.18
	3/26/2012	2.95	NP	-	32.48
	6/26/2012	4.26	NP	-	31.17
	9/24/2012	6.32	NP	-	29.11
	12/17/2012	3.17	NP	-	32.26
	3/25/2013	4.42	NP	-	31.01
	6/17/2013	4.64	NP	-	30.79
	9/9/2013	5.62	NP	-	29.81
	12/4/2013	5.08	NP	-	30.35
	3/3/2014	4.11	NP	-	31.32
	6/13/2014	4.42	NP	-	31.01
	8/26/2014	5.56	NP	-	29.87
	6/13/2014	4.42	NP	-	31.01
	8/26/2014	5.56	NP	-	29.87
	12/8/2014	3.97	NP	-	31.46
	3/3/2015	3.79	NP	-	31.64
	<b>4/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>5/28/2015</b>	<b>NM</b>	<b>NP</b>	-	<b>NM</b>
	<b>6/9/2015</b>	<b>4.93</b>	<b>NP</b>	-	<b>30.50</b>
	<b>7/31/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>8/19/2015</b>	<b>6.31</b>	<b>NP</b>	-	<b>NM</b>
	<b>9/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
<b>MW-2</b>	2/14/2000	5.59	NP	-	30.18
(35.77)	5/22/2000	6.74	NP	-	29.03
	8/23/2000	8.44	NP	-	27.33
	11/28/2000	9.15	NP	-	26.62
	2/21/2001	8.29	NP	-	27.48
	5/15/2001	8.11	NP	-	27.66
	9/19/2001	9.93	NP	-	25.84
	12/19/2001	6.02	NP	-	29.75
	3/13/2002	5.51	NP	-	30.26
	6/24/2002	7.67	NP	-	28.10
	9/26/2002	9.41	NP	-	26.36
	12/20/2002	9.32	NP	-	26.45
	3/17/2003	5.85	NP	-	29.92
	6/26/2003	7.34	NP	-	28.43
	9/24/2003	9.33	NP	-	26.44
	12/30/2003	6.79	NP	-	28.98
	3/29/2004	6.35	NP	-	29.42
	6/29/2004	8.11	NP	-	27.66
	9/27/2004	9.13	NP	-	26.64
	12/14/2004	8.47	NP	-	27.30
	3/7/2005	8.40	NP	-	27.37
	6/20/2005	7.27	NP	-	28.50
	9/19/2005	9.09	NP	-	26.68
	12/12/2005	7.42	NP	-	28.35
	3/13/2006	5.75	NP	-	30.02
	6/27/2006	7.15	NP	-	28.62
	9/25/2006	9.09	NP	-	26.68

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-2</b>	12/11/2006	6.57	NP	-	29.20
	3/19/2007	5.89	NP	-	29.88
	4/20/2007	6.37	NP	-	29.40
	6/18/2007	7.52	NP	-	28.25
	9/17/2007	9.22	NP	-	26.55
	12/17/2007	7.00	NP	-	28.77
	3/24/2008	5.65	NP	-	30.12
	6/23/2008	7.24	NP	-	28.53
	9/22/2008	9.01	NP	-	26.76
	1/5/2009	5.98	NP	-	29.79
	3/16/2009	7.19	NP	-	28.58
	6/15/2009	7.39	NP	-	28.38
	9/14/2009	9.09	NP	-	26.68
	12/21/2009	7.37	NP	-	28.40
	3/16/2010	5.82	NP	-	29.95
	6/21/2010	5.64	NP	-	30.13
	9/20/2010	8.04	NP	-	27.73
	12/14/2010	4.67	NP	-	31.10
	3/21/2011	4.35	NP	-	31.42
	6/8/2011	6.78	NP	-	28.99
	9/26/2011	8.55	NP	-	27.22
	12/12/2011	7.70	NP	-	28.07
	3/26/2012	5.03	NP	-	30.74
	6/26/2012	6.31	NP	-	29.46
	9/24/2012	8.47	NP	-	27.30
	12/17/2012	4.93	NP	-	30.84
	3/25/2013	6.71	NP	-	29.06
	6/17/2013	6.61	NP	-	29.16
	9/9/2013	8.27	NP	-	27.50
	12/4/2013	7.81	NP	-	27.96
	3/3/2014	6.43	NP	-	29.34
	6/13/2014	6.15	NP	-	30.34
	8/26/2014	7.44	NP	-	31.34
	12/8/2014	6.08	NP	-	29.69
	3/3/2015	5.48	NP	-	30.29
	<b>4/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>5/28/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>6/9/2015</b>	<b>4.93</b>	<b>NP</b>	-	<b>30.84</b>
	<b>7/31/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>8/19/2015</b>	<b>8.24</b>	<b>NP</b>	-	<b>27.53</b>
	<b>9/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
<b>MW-3</b>	2/14/2000	7.02	NP	-	29.00
(36.02)	5/22/2000	8.04	NP	-	27.98
	8/23/2000	9.58	NP	-	26.44
	11/28/2000	10.22	NP	-	25.80
	2/21/2001	9.49	NP	-	26.53
	5/15/2001	9.33	NP	-	26.69
	9/19/2001	10.96	NP	-	25.06
	12/19/2001	7.55	NP	-	28.47

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-3</b>	3/13/2002	7.10	NP	-	28.92
	6/24/2002	8.93	NP	-	27.09
	9/26/2002	10.47	NP	-	25.55
	12/20/2002	10.63	NP	-	25.39
	3/17/2003	7.29	NP	-	28.73
	6/26/2003	8.65	NP	-	27.37
	9/24/2003	10.38	NP	-	25.64
	12/30/2003	8.21	NP	-	27.81
	3/29/2004	7.69	NP	-	28.33
	6/29/2004	9.34	NP	-	26.68
	9/27/2004	10.28	NP	-	25.74
	12/14/2004	9.73	NP	-	26.29
	3/7/2005	9.56	NP	-	26.46
	6/20/2005	8.55	NP	-	27.47
	9/19/2005	10.18	NP	-	25.84
	12/12/2005	8.67	NP	-	27.35
	3/13/2006	7.15	NP	-	28.87
	6/27/2006	8.43	NP	-	27.59
	9/25/2006	10.19	NP	-	25.83
	12/11/2006	7.95	NP	-	28.07
	3/19/2007	7.20	NP	-	28.82
	4/20/2007	7.68	NP	-	28.34
	6/18/2007	8.76	NP	-	27.26
	9/17/2007	10.31	NP	-	25.71
	12/17/2007	8.29	NP	-	27.73
	3/24/2008	7.03	NP	-	28.99
	6/23/2008	8.46	NP	-	27.56
	9/22/2008	10.10	NP	-	25.92
	1/5/2009	7.31	NP	-	28.71
	3/16/2009	8.33	NP	-	27.69
	6/15/2009	8.58	NP	-	27.44
	9/14/2009	10.06	NP	-	25.96
	12/21/2009	8.58	NP	-	27.44
	3/16/2010	6.97	NP	-	29.05
	6/21/2010	6.85	NP	-	29.17
	9/20/2010	9.20	NP	-	26.82
	12/14/2010	5.85	NP	-	30.17
	3/21/2011	5.80	NP	-	30.22
	6/8/2011	7.91	NP	-	28.11
	9/26/2011	9.57	NP	-	26.45
	12/12/2011	8.74	NP	-	27.28
	3/26/2012	NM	NM	-	NM
	6/26/2012	7.46	NP	-	28.56
	9/24/2012	9.50	NP	-	26.52
	12/17/2012	Damaged during new tank construction			
	3/25/2013	Damaged during new tank construction			
	12/4/2013	Damaged during new tank construction			

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-3</b>	3/3/2014		Damaged during new tank construction		
	12/8/2014		Damaged during new tank construction		
	3/3/2015		Damaged during new tank construction		
	4/29/2015		<b>Damaged during new tank construction</b>		
	5/28/2015		<b>Damaged during new tank construction</b>		
	6/9/2015		<b>Damaged during new tank construction</b>		
	7/31/2015		<b>Destroyed</b>		
	8/19/2015		<b>Destroyed</b>		
	9/29/2015		<b>Destroyed</b>		
<b>MW-4</b>	2/14/2000	6.36	NP	-	30.03
(36.39)	5/22/2000	7.54	NP	-	28.85
	8/23/2000	9.18	NP	-	27.21
	11/28/2000	9.83	NP	-	26.56
	2/21/2001	9.07	NP	-	27.32
	5/15/2001	8.93	NP	-	27.46
	9/19/2001	10.59	NP	-	25.80
	12/19/2001	6.98	NP	-	29.41
	3/13/2002	6.42	NP	-	29.97
	6/24/2002	8.49	NP	-	27.90
	9/26/2002	10.10	NP	-	26.29
	12/20/2002	10.21	NP	-	26.18
	3/17/2003	6.57	NP	-	29.82
	6/26/2003	8.15	NP	-	28.24
	9/24/2003	10.00	NP	-	26.39
	12/30/2003	7.65	NP	-	28.74
	3/29/2004	7.07	NP	-	29.32
	6/29/2004	8.88	NP	-	27.51
	9/27/2004	9.89	NP	-	26.50
	12/14/2004	9.29	NP	-	27.10
	3/7/2005	9.10	NP	-	27.29
	6/20/2005	8.03	NP	-	28.36
	9/19/2005	9.78	NP	-	26.61
	12/12/2005	8.15	NP	-	28.24
	3/13/2006	6.40	NP	-	29.99
	6/27/2006	7.91	NP	-	28.48
	9/25/2006	9.76	NP	-	26.63
	12/11/2006	7.30	NP	-	29.09
	3/19/2007	6.48	NP	-	29.91
	4/20/2007	7.02	NP	-	29.37
	6/18/2007	8.27	NP	-	28.12
	9/17/2007	9.89	NP	-	26.50
	12/17/2007	7.75	NP	-	28.64
	3/24/2008	6.35	NP	-	30.04
	6/23/2008	7.93	NP	-	28.46
	9/22/2008	9.68	NP	-	26.71
	1/5/2009	6.88	NP	-	29.51
	3/16/2009	7.86	NP	-	28.53
	6/15/2009	8.08	NP	-	28.31
	9/14/2009	9.65	NP	-	26.74

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-4</b>	12/21/2009	8.09	NP	-	28.30
	3/16/2010	5.35	NP	-	31.04
	6/21/2010	6.14	NP	-	30.25
	9/20/2010	8.70	NP	-	27.69
	12/14/2010	5.13	NP	-	31.26
	3/21/2011	4.84	NP	-	31.55
	6/8/2011	7.21	NP	-	29.18
	9/26/2011	9.05	NP	-	27.34
	12/12/2011	8.17	NP	-	28.22
	3/26/2012	5.43	NP	-	30.96
	6/26/2012	6.77	NP	-	29.62
	9/24/2012	9.03	NP	-	27.36
	12/17/2012	5.27	NP	-	31.12
	3/25/2013	7.11	NP	-	29.28
	6/17/2013	7.09	NP	-	29.30
	9/9/2013	8.79	NP	-	27.60
	12/4/2013	8.28	NP	-	28.11
	3/3/2014	6.81	NP	-	29.58
	6/13/2014	6.79	NP	-	29.60
	8/26/2014	8.22	NP	-	28.17
	12/8/2014	6.68	NP	-	29.71
	3/3/2015	6.18	NP	-	30.21
	<b>4/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>5/28/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>6/9/2015</b>	<b>7.60</b>	<b>NP</b>	-	<b>28.79</b>
	<b>7/31/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>8/19/2015</b>	<b>8.97</b>	<b>NP</b>	-	<b>27.42</b>
	<b>9/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
<b>MW-5</b>	2/14/2000	6.02	NP	-	27.50
(33.52)	5/22/2000	6.64	NP	-	26.88
	8/23/2000	8.28	NP	-	25.24
	11/28/2000	5.79	NP	-	27.73
	2/21/2001	8.27	NP	-	25.25
	5/15/2001	6.02	6.02	sheen	27.50
	9/18/2001	9.77	NP	-	23.75
	12/19/2001	6.39	NP	-	27.13
	3/13/2002	6.09	NP	-	27.43
	6/24/2002	7.24	NP	-	26.28
	9/26/2002	9.30	NP	-	24.22
	12/20/2002	8.21	NP	-	25.31
	3/17/2003	5.85	NP	-	27.67
	6/26/2003	7.22	NP	-	26.30
	9/24/2003	9.19	NP	-	24.33
	12/30/2003	7.00	NP	-	26.52
	3/29/2004	6.30	NP	-	27.22
	6/29/2004	8.11	NP	-	25.41
	9/27/2004	9.11	NP	-	24.41
	12/14/2004	8.45	NP	-	25.07
	3/7/2005	8.33	NP	-	25.19

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-5</b>	6/20/2005	7.12	NP	-	26.40
	9/19/2005	9.18	NP	-	24.34
	12/12/2005	7.90	NP	-	25.62
	3/13/2006	5.90	NP	-	27.62
	6/27/2006	6.90	NP	-	26.62
	9/25/2006	9.14	NP	-	24.38
	12/11/2006	6.71	NP	-	26.81
	3/19/2007	5.74	NP	-	27.78
	4/20/2007	6.25	NP	-	27.27
	6/18/2007	7.41	NP	-	26.11
	9/17/2007	9.28	NP	-	24.24
	12/17/2007	7.16	NP	-	26.36
	3/24/2008	5.64	NP	-	27.88
	6/23/2008	6.82	NP	-	26.70
	9/22/2008	9.02	NP	-	24.50
	1/5/2009	6.06	NP	-	27.46
	3/16/2009	6.65	NP	-	26.87
	6/15/2009	7.00	NP	-	26.52
	9/14/2009	8.83	NP	-	24.69
	12/21/2009	7.27	NP	-	26.25
	3/16/2010	5.45	NP	-	28.07
	6/21/2010	4.68	NP	-	28.84
	9/20/2010	7.72	NP	-	25.80
	12/14/2010	3.76	NP	-	29.76
	3/21/2011	4.24	NP	-	29.28
	6/8/2011	9.00	NP	-	24.52
	9/26/2011	9.45	NP	-	24.07
	12/12/2011	7.56	NP	-	25.96
	3/26/2012	4.32	NP	-	29.20
	6/26/2012	5.56	NP	-	27.96
	9/24/2012	8.04	NP	-	25.48
	12/17/2012	4.44	NP	-	29.08
	3/25/2013	6.31	NP	-	27.21
	6/17/2013	5.97	NP	-	27.55
	9/9/2013	7.91	NP	-	25.61
	12/4/2013	7.31	NP	-	26.21
	3/3/2014		--Unable to Access--		
	6/13/2014	5.20	NP	-	28.32
	8/26/2014	6.65	NP	-	26.87
	12/8/2014	6.17	NP	-	27.35
	3/3/2015	5.16	NP	-	28.36
	<b>4/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>5/28/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>6/9/2015</b>	<b>6.38</b>	<b>NP</b>	-	<b>27.14</b>
	<b>7/31/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>8/19/2015</b>	<b>8.19</b>	<b>NP</b>	-	<b>25.33</b>
	<b>9/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
<b>MW-6</b>	2/14/2000	3.72	3.69	0.03	29.64
(33.34)	5/22/2000	4.70	NP	-	28.64

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-6</b>	8/23/2000	6.24	NP	-	27.10
	11/28/2000	6.98	NP	-	26.36
	2/21/2001	6.21	6.21	sheen	27.13
	5/15/2001	8.10	NP	-	25.24
	9/18/2001	7.71	7.66	0.05	25.67
	12/19/2001	4.05	NP	-	29.29
	3/13/2002	3.70	3.70	sheen	29.64
	6/24/2002	5.56	NP	-	27.78
	9/26/2002	7.19	NP	-	26.15
	12/20/2002	7.32	7.32	sheen	26.02
	3/17/2003	3.87	NP	-	29.47
	6/26/2003	5.20	NP	-	28.14
	9/24/2003	7.09	NP	-	26.25
	12/30/2003	4.80	NP	-	28.54
	3/29/2004	4.29	NP	-	29.05
	6/29/2004	5.23	NP	-	28.11
	9/27/2004	6.98	NP	-	26.36
	12/14/2004	6.37	NP	-	26.97
	3/7/2005	6.03	6.03	sheen	27.31
	6/20/2005	5.15	NP	-	28.19
	9/19/2005	6.92	NP	-	26.42
	12/12/2005	5.45	5.45	sheen	27.89
	3/13/2006	4.10	3.88	0.22	29.42
	6/27/2006	5.06	NP	-	28.28
	9/25/2006	7.00	NP	-	26.34
	12/11/2006	4.56	NP	-	28.78
	3/19/2007	4.01	3.98	0.03	29.35
	4/20/2007	4.35	4.32	0.03	29.01
	6/18/2007	5.40	5.40	sheen	27.94
	9/17/2007	6.95	NP	-	26.39
	12/17/2007	4.93	NP	-	28.41
	3/24/2008	3.68	3.67	0.01	29.67
	6/23/2008	5.20	5.20	sheen	28.14
	9/22/2008	6.81	6.81	sheen	26.53
	1/5/2009	3.99	NP	-	29.35
	3/16/2009	5.10	NP	-	28.24
	6/15/2009	5.27	5.27	sheen	28.07
	9/14/2009	6.80	NP	-	26.54
	12/21/2009	5.31	5.31	sheen	28.03
	3/16/2010	3.91	3.91	sheen	29.43
	6/21/2010	3.62	NP	-	29.72
	9/20/2010	5.85	5.85	sheen	27.49
	12/14/2010	2.63	NP	-	30.71
	3/21/2011	2.45	NP	-	30.89
	6/8/2011	4.21	NP	-	29.13
	9/26/2011	6.48	6.47	0.01	26.87
	12/12/2011	5.66	NP	-	27.68
	3/26/2012	3.15	NP	-	30.19
	6/26/2012	4.69	NP	-	28.65

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-6</b>	9/27/2012	6.43	6.41	0.02	26.93
	12/17/2012	3.05	NP	-	30.29
	3/25/2013	4.74	NP	-	28.60
	6/17/2013	4.55	NP		28.79
	9/9/2013	6.16	NP	sheen	27.18
	12/4/2013	5.85	5.85	sheen	27.49
	3/3/2014	4.49	4.49	sheen	28.85
	6/13/2014	4.00	NP	sheen	29.34
	8/26/2014	5.28	5.28	sheen	28.06
	12/8/2014	3.95	3.95	sheen	29.39
	3/3/2015	3.32	3.31	0.01	30.03
	<b>6/9/2015</b>	<b>6.73</b>	<b>6.71</b>	<b>0.02</b>	<b>26.63</b>
	<b>8/19/2015</b>	<b>6.11</b>	<b>6.09</b>	<b>0.02</b>	<b>27.25</b>
<b>MW-7</b>	2/14/2000	8.74	8.54	0.20	25.54
	(34.12)	5/22/2000	9.95	8.92	24.99
		8/23/2000	NM	NM	NM
		11/28/2000	10.94	10.35	23.65
		2/21/2001	10.37	10.01	24.04
		5/15/2001	10.27	10.00	24.07
		9/19/2001	11.04	11.00	23.11
		12/19/2001	9.05	8.78	25.29
		3/13/2002	9.11	8.30	25.66
		6/24/2002	10.38	9.48	24.46
		9/26/2002	11.32	10.53	23.43
		12/23/2002	11.05	10.82	23.25
		3/17/2003	9.18	8.45	25.52
		6/26/2003	10.03	9.28	24.69
		9/24/2003	11.17	10.46	23.52
		12/30/2003	9.83	9.47	24.58
		3/29/2004	9.35	8.62	25.35
		6/29/2004	10.36	9.80	24.21
		9/27/2004	10.97	10.61	23.44
		12/14/2004	10.75	10.30	23.73
		3/7/2005	10.25	9.98	24.09
		6/20/2005	9.89	9.19	24.79
		9/19/2005	10.90	10.45	23.58
		12/12/2005	9.82	9.50	24.56
		3/13/2006	8.35	8.00	26.05
		6/27/2006	9.45	9.04	25.00
		9/25/2006	11.07	9.45	24.35
		12/11/2006	9.10	8.92	25.16
		3/19/2007	8.40	8.24	25.85
		4/20/2007	8.68	8.52	25.57
		6/18/2007	9.53	9.31	24.77
		9/17/2007	10.71	10.45	23.62
		12/17/2007	9.36	9.22	24.87
		3/24/2008	8.17	8.12	25.99
		6/23/2008	9.30	9.11	24.97
		9/22/2008	10.51	10.26	23.81

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-7</b>					
	1/5/2009	8.93	8.93	sheen	25.19
	3/16/2009	9.12	9.10	0.02	25.02
	6/15/2009	9.35	9.20	0.15	24.89
	9/14/2009	10.42	10.36	0.06	23.75
	12/21/2009	9.39	9.39	sheen	24.73
	3/16/2010	7.94	7.94	sheen	26.18
	6/21/2010	7.76	7.76	sheen	26.36
	9/20/2010	9.61	9.61	sheen	24.51
	12/14/2010	7.35	7.35	sheen	26.77
	3/21/2011	6.68	6.68	sheen	27.44
	6/8/2011	7.89	NP	-	26.23
	9/26/2011	9.73	NP	-	24.39
	12/12/2011	9.11	NP	-	25.01
	3/26/2012	NM	NM	-	NM
	6/26/2012	8.00	NP	-	26.12
	9/24/2012	9.67	9.64	0.03	24.47
	12/17/2012	7.27	NP	-	26.85
	3/25/2013	8.28	NP	-	25.84
	6/17/2013	8.28	NP	sheen	25.84
	9/9/2013	9.53	NP	-	24.59
	12/4/2013	9.22	9.22	sheen	24.90
	3/3/2014	8.19	8.19	sheen	25.93
	6/13/2014	8.08	NP	-	26.04
	8/26/2014	9.10	9.09	0.01	25.03
	12/8/2014	8.55	8.55	sheen	25.57
	3/3/2015	7.63	NP	-	26.49
	<b>6/9/2015</b>	<b>8.65</b>	<b>NP</b>	-	<b>25.47</b>
	<b>8/19/2015</b>	<b>9.64</b>	<b>9.63</b>	<b>0.01</b>	<b>23.71</b>
<b>MW-8</b>					
(33.95)	2/14/2000	7.18	NP	-	26.77
	5/22/2000	8.00	NP	-	25.95
	8/23/2000	9.26	NP	-	24.69
	11/28/2000	9.91	NP	-	24.04
	2/21/2001	9.40	NP	-	24.55
	5/15/2001	9.30	NP	-	24.65
	9/19/2001	10.49	NP	-	23.46
	12/19/2001	8.42	NP	-	25.53
	3/13/2002	7.38	NP	-	26.57
	6/24/2002	8.81	NP	-	25.14
	9/26/2002	10.15	NP	-	23.80
	12/20/2002	10.50	NP	-	23.45
	3/17/2003	7.48	NP	-	26.47
	6/26/2003	8.61	NP	-	25.34
	9/24/2003	10.10	NP	-	23.85
	12/30/2003	8.74	NP	-	25.21
	3/29/2004	8.74	NP	-	25.21
	6/29/2004	9.19	NP	-	24.76
	9/27/2004	10.12	NP	-	23.83
	12/14/2004	9.74	NP	-	24.21
	3/7/2005	9.34	NP	-	24.61

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-8</b>	6/20/2005	8.48	NP	-	25.47
	9/19/2005	9.86	NP	-	24.09
	12/12/2005	8.73	NP	-	25.22
	3/13/2006	6.96	NP	-	26.99
	6/27/2006	8.43	NP	-	25.52
	9/25/2006	9.92	NP	-	24.03
	12/11/2006	7.95	NP	-	26.00
	3/19/2007	7.00	NP	-	26.95
	6/18/2007	8.53	NP	-	25.42
	9/17/2007	9.92	NP	-	24.03
	12/17/2007	8.44	NP	-	25.51
	3/24/2008	7.02	NP	-	26.93
	6/23/2008	8.22	NP	-	25.73
	9/22/2008	9.69	NP	-	24.26
	1/5/2009	7.98	NP	-	25.97
	3/16/2009	8.30	NP	-	25.65
	6/15/2009	8.43	NP	-	25.52
	9/14/2009	9.71	NP	-	24.24
	12/21/2009	8.59	NP	-	25.36
	3/16/2010	6.95	NP	-	27.00
	6/21/2010	6.61	NP	-	27.34
	9/20/2010	8.91	NP	-	25.04
	12/14/2010	6.13	NP	-	27.82
	3/21/2011	5.39	NP	-	28.56
	6/8/2011	7.48	NP	-	26.47
	9/26/2011	9.04	NP	-	24.91
	12/12/2011	8.35	NP	-	25.60
	3/26/2012	5.92	NP	-	28.03
	6/26/2012	7.07	NP	-	26.88
	9/24/2012	9.03	NP	-	24.92
	12/17/2012	6.24	NP	-	27.71
	3/25/2013	7.41	NP	-	26.54
	6/17/2013	7.48	NP	-	26.47
	9/9/2013	8.94	NP	-	25.01
	12/4/2013	7.48	NP	-	26.47
	3/3/2014	7.35	NP	-	26.60
	6/13/2014	7.18	NP	-	26.77
	8/26/2014	8.41	NP	-	25.54
	12/8/2014	7.66	NP	-	26.29
	3/3/2015	6.78	NP	-	27.17
	<b>4/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>5/28/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>6/9/2015</b>	<b>7.90</b>	<b>NP</b>	-	<b>26.05</b>
	<b>7/31/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>8/19/2015</b>	<b>9.19</b>	<b>NP</b>	-	<b>24.76</b>
	<b>9/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
<b>MW-9</b>	2/14/2000	9.66	NP	-	26.87
(36.53)	5/22/2000	10.24	NP	-	26.29
	8/23/2000	11.42	NP	-	25.11

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-9</b>	11/28/2000	12.18	NP	-	24.35
	2/21/2001	11.85	NP	-	24.68
	5/15/2001	11.83	NP	-	24.70
	9/19/2001	12.86	NP	-	23.67
	12/19/2001	11.87	NP	-	24.66
	3/13/2002	10.30	NP	-	26.23
	6/24/2002	11.21	NP	-	25.32
	9/26/2002	11.43	NP	-	25.10
	12/23/2002	12.97	NP	-	23.56
	3/17/2003	10.62	NP	-	25.91
	6/26/2003	10.86	NP	-	25.67
	9/24/2003	12.27	NP	-	24.26
	12/30/2003	11.77	NP	-	24.76
	3/29/2004	10.39	NP	-	26.14
	6/29/2004	11.58	NP	-	24.95
	9/27/2004	12.56	NP	-	23.97
	12/14/2004	12.42	NP	-	24.11
	3/7/2005	11.71	NP	-	24.82
	6/20/2005	10.95	NP	-	25.58
	9/19/2005	12.22	NP	-	24.31
	12/12/2005	11.34	NP	-	25.19
	3/13/2006	9.45	NP	-	27.08
	6/27/2006	10.64	NP	-	25.89
	9/25/2006	12.10	NP	-	24.43
	12/11/2006	10.47	NP	-	26.06
	3/19/2007	9.33	NP	-	27.20
	6/18/2007	10.68	NP	-	25.85
	9/17/2007	11.98	NP	-	24.55
	12/17/2007	10.88	NP	-	25.65
	3/24/2008	9.40	NP	-	27.13
	6/23/2008	10.32	NP	-	26.21
	9/22/2008	11.73	NP	-	24.80
	1/5/2009	10.77	NP	-	25.76
	3/16/2009	10.38	NP	-	26.15
	6/15/2009	10.46	NP	-	26.07
	9/14/2009	11.73	NP	-	24.80
	12/21/2009	11.01	NP	-	25.52
	3/16/2010	9.26	NP	-	27.27
	6/21/2010	8.66	NP	-	27.87
	9/20/2010	10.68	NP	-	25.85
	12/14/2010	8.52	NP	-	28.01
	3/21/2011	6.93	NP	-	29.60
	6/8/2011	8.80	NP	-	27.73
	9/26/2011	10.64	NP	-	25.89
	12/12/2011	10.11	NP	-	26.42
	3/26/2012	7.34	NP	-	29.19
	6/26/2012	8.45	NP	-	28.08
	9/24/2012	10.66	NP	-	25.87
	12/17/2012	7.93	NP	-	28.60

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-9</b>	3/25/2013	8.56	NP	-	27.97
	6/17/2013	8.86	NP	-	27.67
	9/9/2013	10.64	NP	-	25.89
	12/4/2013	10.18	NP	-	26.35
	3/3/2014	8.86	NP	-	27.67
	6/13/2014	8.30	NP	-	28.23
	8/26/2014	9.98	NP	-	26.55
	12/8/2014	9.20	NP	-	27.33
	3/3/2015	7.83	NP	-	28.70
	<b>4/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>5/28/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>6/9/2015</b>	<b>9.16</b>	<b>NP</b>	-	27.37
	<b>7/31/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>8/19/2015</b>	<b>10.77</b>	<b>NP</b>	-	25.76
	<b>9/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
<b>MW-10</b>	2/14/2000	8.46	NP	-	27.36
(35.82)	5/22/2000	5.59	NP	-	30.23
	8/23/2000	11.21	NP	-	24.61
	11/28/2000	11.86	NP	-	23.96
	2/21/2001	11.16	NP	-	24.66
	5/15/2001	11.04	NP	-	24.78
	9/19/2001	12.59	NP	-	23.23
	12/19/2001	9.42	NP	-	26.40
	3/13/2002	8.58	NP	-	27.24
	6/24/2002	10.54	NP	-	25.28
	9/26/2002	12.12	NP	-	23.70
	12/23/2002	12.14	NP	-	23.68
	3/17/2003	8.78	NP	-	27.04
	6/26/2003	10.24	NP	-	25.58
	9/24/2003	12.02	NP	-	23.80
	12/30/2003	9.98	NP	-	25.84
	3/29/2004	9.26	NP	-	26.56
	6/29/2004	10.98	NP	-	24.84
	9/27/2004	12.00	NP	-	23.82
	12/14/2004	11.38	NP	-	24.44
	3/7/2005	11.19	NP	-	24.63
	6/20/2005	10.13	NP	-	25.69
	9/19/2005	11.84	NP	-	23.98
	12/12/2005	10.29	NP	-	25.53
	3/13/2006	8.35	NP	-	27.47
	6/27/2006	9.98	NP	-	25.84
	9/25/2006	11.80	NP	-	24.02
	12/11/2006	9.49	NP	-	26.33
	3/19/2007	8.57	NP	-	27.25
	6/18/2007	10.30	NP	-	25.52
	9/17/2007	11.91	NP	-	23.91
	12/17/2007	9.94	NP	-	25.88
	3/24/2008	8.42	NP	-	27.40
	6/23/2008	9.97	NP	-	25.85

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-10</b>	9/22/2008	11.65	NP	-	24.17
	1/5/2009	9.27	NP	-	26.55
	3/16/2009	9.91	NP	-	25.91
	6/15/2009	10.11	NP	-	25.71
	9/14/2009	11.67	NP	-	24.15
	12/21/2009	10.13	NP	-	25.69
	3/16/2010	8.43	NP	-	27.39
	6/21/2010	8.16	NP	-	27.66
	9/20/2010	10.64	NP	-	25.18
	12/14/2010	7.08	NP	-	28.74
	3/21/2011	6.52	NP	-	29.30
	6/8/2011	9.10	NP	-	26.72
	9/26/2011	10.92	NP	-	24.90
	12/12/2011	10.08	NP	-	25.74
	3/26/2012	7.31	NP	-	28.51
	6/26/2012	8.70	NP	-	27.12
	9/24/2012	10.90	NP	-	24.92
	12/17/2012	7.48	NP	-	28.34
	3/25/2013	9.00	NP	-	26.82
	6/17/2013	9.10	NP	-	26.72
	9/9/2013	10.75	NP	-	25.07
	12/4/2013	10.27	NP	-	25.55
	3/3/2014	8.94	NP	-	26.88
	6/13/2014	8.78	NP	-	27.04
	8/26/2014	10.18	NP	-	25.64
	12/8/2014	9.05	NP	-	26.77
	3/3/2015	8.30	NP	-	27.52
	<b>4/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>5/28/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>6/9/2015</b>	<b>9.55</b>	<b>NP</b>	-	26.27
	<b>7/31/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>8/19/2015</b>	<b>10.94</b>	<b>NP</b>	-	24.88
	<b>9/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
<b>MW-11</b>	2/14/2000	5.04	NP	-	31.43
(36.47)	5/22/2000	3.11	NP	-	33.36
	8/23/2000	7.97	NP	-	28.50
	11/28/2000	7.66	NP	-	28.81
	2/21/2001	7.48	NP	-	28.99
	5/15/2001	7.30	NP	-	29.17
	9/19/2001	9.29	NP	-	27.18
	12/19/2001	5.44	NP	-	31.03
	3/13/2002	5.23	NP	-	31.24
	6/24/2002	7.71	NP	-	28.76
	9/26/2002	9.01	NP	-	27.46
	12/23/2002	7.07	NP	-	29.40
	3/17/2003	5.72	NP	-	30.75
	6/26/2003	7.55	NP	-	28.92
	9/24/2003	8.89	NP	-	27.58
	12/30/2003	5.77	NP	-	30.70

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-11</b>	3/29/2004	6.17	NP	-	30.30
	6/29/2004	8.10	NP	-	28.37
	9/27/2004	8.54	NP	-	27.93
	12/14/2004	6.56	NP	-	29.91
	3/7/2005	7.90	NP	-	28.57
	6/20/2005	6.69	NP	-	29.78
	9/19/2005	8.69	NP	-	27.78
	12/12/2005	6.49	NP	-	29.98
	3/13/2006	5.35	NP	-	31.12
	6/26/2006	6.68	NP	-	29.79
	9/25/2006	8.68	NP	-	27.79
	12/11/2006	9.11	NP	-	27.36
	3/19/2007	5.71	NP	-	30.76
	6/18/2007	7.53	NP	-	28.94
	9/17/2007	8.66	NP	-	27.81
	12/17/2007	6.10	NP	-	30.37
	3/24/2008	5.39	NP	-	31.08
	6/23/2008	6.64	NP	-	29.83
	9/22/2008	8.27	NP	-	28.20
	1/5/2009	5.31	NP	-	31.16
	3/16/2009	6.13	NP	-	30.34
	6/15/2009	7.04	NP	-	29.43
	9/14/2009	8.51	8.45	0.06	28.01
	12/21/2009	5.83	NP	-	30.64
	3/16/2010	5.32	NP	-	31.15
	6/21/2010	5.17	NP	-	31.30
	9/20/2010	6.80	NP	-	29.67
	12/14/2010	3.90	NP	-	32.57
	3/21/2011	3.80	NP	-	32.67
	6/8/2011	5.26	NP	-	31.21
	9/26/2011	7.75	NP	-	28.72
	12/12/2011	6.21	NP	-	30.26
	3/26/2012	4.30	NP	-	32.17
	6/26/2012	5.29	NP	-	31.18
	9/24/2012	7.95	NP	-	28.52
	12/17/2012	4.36	NP	-	32.11
	3/25/2013	5.29	NP	-	31.18
	6/17/2013	5.41	NP	-	31.06
	9/9/2013	7.21	NP	-	29.26
	12/4/2013	6.36	NP	-	30.11
	3/3/2014	4.78	NP	-	31.69
	6/13/2014	5.82	NP	-	30.65
	8/26/2014	7.27	NP	-	29.20
	12/8/2014	5.28	NP	-	31.19
	3/3/2015	5.04	NP	-	31.43
	<b>4/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>5/28/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>6/9/2015</b>	<b>6.36</b>	<b>NP</b>	-	<b>30.11</b>
	<b>7/31/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-11</b>	<b>8/19/2015</b>	<b>8.18</b>	<b>NP</b>	sheen	25.94
	<b>9/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
<b>MW-12</b>	2/14/2000	4.99	NP	-	30.96
(35.95)	5/22/2000	6.57	NP	-	29.38
	8/23/2000	8.65	NP	-	27.30
	11/28/2000	9.16	NP	-	26.79
	2/21/2001	8.32	NP	-	27.63
	5/15/2001	8.16	NP	-	27.79
	9/19/2001	10.17	NP	-	25.78
	12/19/2001	5.54	NP	-	30.41
	3/13/2002	4.85	NP	-	31.10
	6/24/2002	7.75	NP	-	28.20
	9/26/2002	9.68	NP	-	26.27
	12/23/2002	8.75	NP	-	27.20
	3/17/2003	5.25	NP	-	30.70
	6/26/2003	7.35	NP	-	28.60
	9/24/2003	9.57	NP	-	26.38
	12/30/2003	6.28	NP	-	29.67
	3/29/2004	5.99	NP	-	29.96
	6/29/2004	8.28	NP	-	27.67
	9/27/2004	9.32	NP	-	26.63
	12/14/2004	8.22	NP	-	27.73
	3/7/2005	8.41	NP	-	27.54
	6/20/2005	7.19	NP	-	28.76
	9/19/2005	9.29	NP	-	26.66
	12/12/2005	7.22	NP	-	28.73
	3/13/2006	5.13	NP	-	30.82
	6/27/2006	7.06	NP	-	28.89
	9/25/2006	9.34	NP	-	26.61
	12/11/2006	6.12	NP	-	29.83
	3/19/2007	5.40	NP	-	30.55
	6/18/2007	7.56	NP	-	28.39
	9/17/2007	9.47	NP	-	26.48
	12/17/2007	6.80	NP	-	29.15
	3/24/2008	5.20	NP	-	30.75
	6/23/2008	7.14	NP	-	28.81
	9/22/2008	9.20	NP	-	26.75
	1/5/2009	5.80	NP	-	30.15
	3/16/2009	6.84	NP	-	29.11
	6/15/2009	7.31	NP	-	28.64
	9/14/2009	9.17	NP	-	26.78
	12/21/2009	7.04	NP	-	28.91
	3/16/2010	5.29	NP	-	30.66
	6/21/2010	5.12	NP	-	30.83
	9/20/2010	7.96	NP	-	27.99
	12/14/2010	3.94	NP	-	32.01
	3/21/2011	3.84	NP	-	32.11
	6/8/2011	6.19	NP	-	29.76
	9/26/2011	8.49	NP	-	27.46

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-12</b>	12/12/2011	7.30	NP	-	28.65
	3/26/2012	4.34	NP	-	31.61
	6/26/2012	5.80	NP	-	30.15
	9/24/2012	8.46	NP	-	27.49
	12/17/2012	3.85	NP	-	32.10
	3/25/2013	6.15	NP	-	29.80
	6/17/2013	6.21	NP	-	29.74
	9/9/2013	8.19	NP	-	27.76
	12/4/2013	7.47	NP	-	28.48
	3/3/2014	5.85	NP	-	30.10
	6/13/2014	5.89	NP	-	30.06
	8/26/2014	7.63	NP	-	28.32
	12/8/2014	5.78	NP	-	30.17
	3/3/2015	3.22	NP	-	32.73
	<b>4/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>5/28/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>6/9/2015</b>	<b>6.87</b>	<b>NP</b>	-	<b>29.08</b>
	<b>7/31/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>8/19/2015</b>	<b>8.52</b>	<b>NP</b>	-	<b>27.43</b>
	<b>9/29/2015</b>	<b>6.72</b>	<b>6.71</b>	<b>0.01</b>	<b>29.23</b>
<b>MW-13</b>	2/14/2000	3.85	NP	-	34.04
(37.89)	5/22/2000	5.03	NP	-	32.86
	8/23/2000	7.00	NP	-	30.89
	11/28/2000	6.59	NP	-	31.30
	2/21/2001	6.26	NP	-	31.63
	5/15/2001	6.03	NP	-	31.86
	9/19/2001	8.55	NP	-	29.34
	12/19/2001	3.77	NP	-	34.12
	3/13/2002	3.72	NP	-	34.17
	6/24/2002	6.56	NP	-	31.33
	9/26/2002	8.16	NP	-	29.73
	12/23/2002	5.71	NP	-	32.18
	3/17/2003	4.13	NP	-	33.76
	6/26/2003	6.39	NP	-	31.50
	9/24/2003	8.27	NP	-	29.62
	12/30/2003	4.00	NP	-	33.89
	3/29/2004	4.80	NP	-	33.09
	6/29/2004	7.00	NP	-	30.89
	9/27/2004	7.45	NP	-	30.44
	12/14/2004	5.39	NP	-	32.50
	3/7/2005	6.62	NP	-	31.27
	6/20/2005	5.63	NP	-	32.26
	9/19/2005	7.77	NP	-	30.12
	12/12/2005	5.23	NP	-	32.66
	3/13/2006	4.08	NP	-	33.81
	6/27/2006	5.87	NP	-	32.02
	9/25/2006	7.61	NP	-	30.28
	12/11/2006	5.55	NP	-	32.34
	3/19/2007	4.43	NP	-	33.46

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-13</b>	6/18/2007	6.34	NP	-	31.55
	9/17/2007	7.55	NP	-	30.34
	12/17/2007	4.93	NP	-	32.96
	3/24/2008	4.14	NP	-	33.75
	6/23/2008	5.69	NP	-	32.20
	9/22/2008	7.20	NP	-	30.69
	1/5/2009	3.78	NP	-	34.11
	3/16/2009	4.76	NP	-	33.13
	6/15/2009	5.77	NP	-	32.12
	9/14/2009	7.24	NP	-	30.65
	12/21/2009	4.52	NP	-	33.37
	3/16/2010	3.99	NP	-	33.90
	6/21/2010	4.05	NP	-	33.84
	9/20/2010	5.58	NP	-	32.31
	12/14/2010	2.86	NP	-	35.03
	3/21/2011	2.95	NP	-	34.94
	6/8/2011	5.14	NP	-	32.75
	9/26/2011	6.80	NP	-	31.09
	12/12/2011	5.36	NP	-	32.53
	3/26/2012	3.39	NP	-	34.50
	6/26/2012	4.39	NP	-	33.50
	9/24/2012	7.01	NP	-	30.88
	12/17/2012	3.18	NP	-	34.71
	3/25/2013	4.46	NP	-	33.43
	6/17/2013	4.69	NP		33.20
	9/9/2013	6.42	NP		31.47
	12/4/2013	5.33	NP		32.56
	3/3/2014	3.52	NP		34.37
	6/13/2014	4.82	NP		33.07
	8/26/2014	6.47	NP		31.42
	12/8/2014	4.14	NP	-	33.75
	3/3/2015	4.21	NP	-	33.68
	<b>4/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>5/28/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>6/9/2015</b>	<b>5.70</b>	<b>NP</b>	-	<b>32.19</b>
	<b>7/31/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>8/19/2015</b>	<b>7.23</b>	<b>NP</b>	-	<b>30.66</b>
	<b>9/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
<b>MW-14</b>	2/14/2000	2.73	NP	-	33.55
(36.28)	5/22/2000	4.50	NP	-	31.78
	8/23/2000	6.55	NP	-	29.73
	11/28/2000	6.36	NP	-	29.92
	2/21/2001	5.65	NP	-	30.63
	5/15/2001	4.67	NP	-	31.61
	9/19/2001	7.71	NP	-	28.57
	12/19/2001	3.10	NP	-	33.18
	3/13/2002	2.84	NP	-	33.44
	6/24/2002	5.90	NP	-	30.38
	9/26/2002	7.45	NP	-	28.83

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-14</b>	12/23/2002	5.39	NP	-	30.89
	3/17/2003	3.17	NP	-	33.11
	6/26/2003	5.54	NP	-	30.74
	9/24/2003	7.47	NP	-	28.81
	12/30/2003	3.52	NP	-	32.76
	3/29/2004	3.92	NP	-	32.36
	6/29/2004	6.38	NP	-	29.90
	9/27/2004	6.82	NP	-	29.46
	12/14/2004	5.21	NP	-	31.07
	3/7/2005	5.97	NP	-	30.31
	6/20/2005	5.05	NP	-	31.23
	9/19/2005	7.12	NP	-	29.16
	12/12/2005	4.77	NP	-	31.51
	3/13/2006	3.18	NP	-	33.10
	6/27/2006	5.17	NP	-	31.11
	9/25/2006	7.10	NP	-	29.18
	12/11/2006	3.81	NP	-	32.47
	3/19/2007	3.44	NP	-	32.84
	6/18/2007	5.62	NP	-	30.66
	9/17/2007	7.15	NP	-	29.13
	12/17/2007	4.38	NP	-	31.90
	3/24/2008	3.21	NP	-	33.07
	6/23/2008	5.28	NP	-	31.00
	9/22/2008	6.93	NP	-	29.35
	1/5/2009	3.11	NP	-	33.17
	3/16/2009	4.42	NP	-	31.86
	6/15/2009	5.15	NP	-	31.13
	9/14/2009	6.81	NP	-	29.47
	12/21/2009	4.21	NP	-	32.07
	3/16/2010	3.16	NP	-	33.12
	6/21/2010	3.17	NP	-	33.11
	9/20/2010	5.41	NP	-	30.87
	12/14/2010	1.93	NP	-	34.35
	3/21/2011	2.15	NP	-	34.13
	6/8/2011	4.29	NP	-	31.99
	9/26/2011	6.38	NP	-	29.90
	12/12/2011	4.83	NP	-	31.45
	3/26/2012	2.50	NP	-	33.78
	6/26/2012	3.73	NP	-	32.55
	9/24/2012	6.43	NP	-	29.85
	12/17/2012	2.04	NP	-	34.24
	3/25/2013	3.88	NP	-	32.40
	6/17/2013	4.07	NP	-	32.21
	9/9/2013	5.80	NP	-	30.48
	12/4/2013	4.95	NP	-	31.33
	3/3/2014	3.11	NP	-	33.17
	6/13/2014	4.00	NP	-	32.28
	8/26/2014	5.46	NP	-	30.82
	12/8/2014	3.43	NP	-	32.85

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-14</b>	3/3/2015	3.23	NP	-	33.05
	<b>4/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>5/28/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>6/9/2015</b>	<b>4.88</b>	<b>NP</b>	-	31.40
	<b>7/31/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>8/19/2015</b>	<b>6.46</b>	<b>NP</b>	-	29.82
	<b>9/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
<b>MW-15</b>	2/14/2000	4.09	NP	-	33.41
	(37.50)	5.80	NP	-	31.70
	8/23/2000	9.21	NP	-	28.29
	11/28/2000	8.90	NP	-	28.60
	2/21/2001	7.46	NP	-	30.04
	5/15/2001	7.80	NP	-	29.70
	9/18/2001	10.46	NP	-	27.04
	12/19/2001	4.03	NP	-	33.47
	3/13/2002	4.14	NP	-	33.36
	6/24/2002	7.93	NP	-	29.57
	9/26/2002	10.13	NP	-	27.37
	12/23/2002	5.72	5.72	sheen	31.78
	3/17/2003	3.62	NP	-	33.88
	6/26/2003	7.25	NP	-	30.25
	9/24/2003	10.02	NP	-	27.48
	12/30/2003	4.07	NP	-	33.43
	3/29/2004	5.09	NP	-	32.41
	6/29/2004	8.50	NP	-	29.00
	9/27/2004	9.01	NP	-	28.49
	12/14/2004	6.25	NP	-	31.25
	3/7/2005	7.99	NP	-	29.51
	6/20/2005	6.71	NP	-	30.79
	9/19/2005	9.54	NP	-	27.96
	12/12/2005	5.66	NP	-	31.84
	3/13/2006	3.99	NP	-	33.51
	6/27/2006	6.68	NP	-	30.82
	9/25/2006	9.51	NP	-	27.99
	12/11/2006	5.21	NP	-	32.29
	3/19/2007	4.49	NP	-	33.01
	6/18/2007	7.30	NP	-	30.20
	9/17/2007	8.83	NP	-	28.67
	12/17/2007	5.33	NP	-	32.17
	3/24/2008	4.11	NP	-	33.39
	6/23/2008	6.71	NP	-	30.79
	9/22/2008	9.16	NP	-	28.34
	1/5/2009	3.56	NP	-	33.94
	3/16/2009	5.81	NP	-	31.69
	6/15/2009	6.64	NP	-	30.86
	9/14/2009	8.92	NP	-	28.58
	12/21/2009	4.73	NP	-	32.77
	3/16/2010	3.92	NP	-	33.58
	6/21/2010	4.20	NP	-	33.30

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-15</b>	9/20/2010	7.74	NP	-	29.76
	12/14/2010	3.11	NP	-	34.39
	3/21/2011	2.40	NP	-	35.10
	6/8/2011	5.38	NP	-	32.12
	9/26/2011	8.12	NP	-	29.38
	12/12/2011	6.06	NP	-	31.44
	3/26/2012	2.80	NP	-	34.70
	6/26/2012	4.99	NP	-	32.51
	9/24/2012	8.34	NP	-	29.16
	12/17/2012	3.79	NP	-	33.71
	3/25/2013	5.21	NP	-	32.29
	6/17/2013	5.43	NP	-	32.07
	9/9/2013	7.75	NP	-	29.75
	12/4/2013	6.44	NP	-	31.06
	3/3/2014	4.58	NP	-	32.92
	6/13/2014	5.34	NP	-	32.16
	8/26/2014	7.31	NP	-	30.19
	12/8/2014	4.57	NP	-	32.93
	3/3/2015	3.59	NP	-	33.91
	<b>4/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>5/28/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>6/9/2015</b>	<b>6.31</b>	<b>NP</b>	-	<b>31.19</b>
	<b>7/31/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>8/19/2015</b>	<b>8.62</b>	<b>NP</b>	-	<b>28.88</b>
	<b>9/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
<b>MW-16</b>	2/14/2000	3.44	NP	-	31.49
(34.93)	5/22/2000	4.98	NP	-	29.95
	8/23/2000	6.99	NP	-	27.94
	11/28/2000	7.51	NP	-	27.42
	2/21/2001	6.60	NP	-	28.33
	5/15/2001	6.51	NP	-	28.42
	9/19/2001	8.48	NP	-	26.45
	12/19/2001	3.99	NP	-	30.94
	3/13/2002	3.35	NP	-	31.58
	6/24/2002	5.11	NP	-	29.82
	9/26/2002	6.02	NP	-	28.91
	12/23/2002	7.09	NP	-	27.84
	3/17/2003	3.63	NP	-	31.30
	6/26/2003	5.60	NP	-	29.33
	9/24/2003	8.95	NP	-	25.98
	12/30/2003	4.71	NP	-	30.22
	3/29/2004	4.37	NP	-	30.56
	6/29/2004	6.54	NP	-	28.39
	9/27/2004	7.63	NP	-	27.30
	12/14/2004	6.60	NP	-	28.33
	3/7/2005	6.67	NP	-	28.26
	6/20/2005	5.53	NP	-	29.40
	9/19/2005	7.59	NP	-	27.34
	12/12/2005	5.56	NP	-	29.37

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-16</b>	3/13/2006	3.60	NP	-	31.33
	6/27/2006	5.44	NP	-	29.49
	9/25/2006	7.60	NP	-	27.33
	12/11/2006	4.52	NP	-	30.41
	3/19/2007	3.83	NP	-	31.10
	4/20/2007	4.41	NP	-	30.52
	6/18/2007	5.87	NP	-	29.06
	9/17/2007	7.79	NP	-	27.14
	12/17/2007	5.10	NP	-	29.83
	3/24/2008	3.63	NP	-	31.30
	6/23/2008	5.45	NP	-	29.48
	9/22/2008	7.52	NP	-	27.41
	1/5/2009	4.23	NP	-	30.70
	3/16/2009	5.19	NP	-	29.74
	6/15/2009	5.57	NP	-	29.36
	9/14/2009	7.46	NP	-	27.47
	12/21/2009	5.36	NP	-	29.57
	3/16/2010	3.81	NP	-	31.12
	6/21/2010	3.67	NP	-	31.26
	9/20/2010	6.18	NP	-	28.75
	12/14/2010	2.46	NP	-	32.47
	3/21/2011	2.33	NP	-	32.60
	6/8/2011	4.69	NP	-	30.24
	9/26/2011	6.76	NP	-	28.17
	12/12/2011	5.61	NP	-	29.32
	3/26/2012	2.86	NP	-	32.07
	6/26/2012	5.23	NP	-	29.70
	9/24/2012	6.77	NP	-	28.16
	12/17/2012	2.64	NP	-	32.29
	3/25/2013	4.64	NP	-	30.29
	6/17/2013	4.67	NP	-	30.26
	9/9/2013	6.48	NP	-	28.45
	12/4/2013	5.93	NP	-	29.00
	3/3/2014	4.53	NP	-	30.40
	6/13/2014	4.39	NP	-	30.54
	8/26/2014	5.95	NP	-	28.98
	12/8/2014	4.46	NP	-	30.47
	3/3/2015	3.69	NP	-	31.24
	<b>4/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>5/28/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>6/9/2015</b>	<b>5.24</b>	<b>NP</b>	-	<b>29.69</b>
	<b>7/31/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>8/19/2015</b>	<b>6.77</b>	<b>NP</b>	-	<b>28.16</b>
	<b>9/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
<b>MW-17</b>	2/14/2000	4.22	NP	-	31.83
(36.05)	5/22/2000	4.70	NP	-	31.35
	8/23/2000	5.91	NP	-	30.14
	11/28/2000	5.82	NP	-	30.23
	2/21/2001	5.46	NP	-	30.59

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-17</b>	5/15/2001	5.26	NP	-	30.79
	9/18/2001	6.84	NP	-	29.21
	12/19/2001	4.67	NP	-	31.38
	3/13/2002	4.17	NP	-	31.88
	6/24/2002	5.31	NP	-	30.74
	9/26/2002	6.62	NP	-	29.43
	3/17/2003	4.40	NP	-	31.65
	6/26/2003	5.22	NP	-	30.83
	9/24/2003	6.57	NP	-	29.48
	12/30/2003	4.61	NP	-	31.44
	3/29/2004	4.45	NP	-	31.60
	6/29/2004	5.25	NP	-	30.80
	9/27/2004	5.96	NP	-	30.09
	12/14/2004	Unable to Access, Due to Fuel Transfer Activities			
	3/7/2005	5.43	NP	-	30.62
	6/20/2005	4.90	NP	-	31.15
	9/19/2005	6.18	NP	-	29.87
	12/12/2005	5.03	NP	-	31.02
	3/13/2006	4.31	NP	-	31.74
	6/27/2006	4.91	4.91	sheen	31.14
	9/25/2006	6.22	NP	-	29.83
	12/11/2006	4.42	NP	-	31.63
	3/19/2007	4.35	NP	-	31.70
	4/20/2007	4.48	NP	-	31.57
	6/18/2007	5.10	NP	-	30.95
	9/17/2007	6.28	NP	-	29.77
	12/17/2007	4.69	NP	-	31.36
	3/24/2008	4.19	NP	-	31.86
	6/23/2008	4.88	NP	-	31.17
	9/22/2008	6.11	NP	-	29.94
	1/5/2009	3.84	NP	-	32.21
	3/16/2009	4.14	NP	-	31.91
	6/15/2009	4.94	NP	-	31.11
	9/14/2009	5.94	NP	-	30.11
	12/21/2009	4.27	NP	-	31.78
	3/16/2010	4.07	NP	-	31.98
	6/21/2010	4.31	NP	-	31.74
	9/20/2010	5.06	NP	-	30.99
	12/14/2010	3.48	NP	-	32.57
	3/21/2011	3.84	NP	-	32.21
	6/8/2011	5.08	NP	-	30.97
	9/26/2011	5.77	NP	-	30.28
	12/12/2011	5.90	NP	-	30.15
	3/26/2012	3.98	NP	-	32.07
	6/26/2012	4.54	NP	-	31.51
	9/24/2012	5.70	NP	-	30.35
	12/17/2012	3.44	NP	-	32.61
	3/25/2013	4.59	NP	-	31.46
	6/17/2013	4.61	NP	-	31.44

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-17</b>	9/9/2013	3.17	NP	-	32.88
	12/4/2013	4.78	NP	-	31.27
	3/3/2014	4.01	NP	-	32.04
	6/13/2014	4.64	NP	-	31.41
	8/26/2014	5.26	NP	-	30.79
	12/8/2014	4.24	NP	-	31.81
	3/3/2015	4.45	NP	-	31.60
	<b>4/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>5/28/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>6/9/2015</b>	<b>4.78</b>	<b>NP</b>	-	31.27
	<b>7/31/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>8/19/2015</b>	<b>5.72</b>	<b>NP</b>	-	30.33
	<b>9/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
<b>MW-18</b>	2/14/2000	0.87	NP	-	32.89
(33.76)	5/22/2000	2.15	NP	-	31.61
	8/23/2000	3.62	3.62	sheen	30.14
	11/28/2000	3.55	NP	-	30.21
	2/21/2001	3.10	NP	-	30.66
	5/15/2001	2.83	NP	-	30.93
	9/18/2001	4.68	4.66	0.02	29.10
	12/19/2001	0.25	NP	-	33.51
	3/13/2002	0.97	0.97	sheen	32.79
	6/24/2002	3.03	NP	-	30.73
	9/26/2002	4.32	NP	-	29.44
	12/20/2002	2.83	NP	-	30.93
	3/17/2003	1.48	NP	-	32.28
	6/26/2003	2.76	NP	-	31.00
	9/24/2003	4.31	NP	-	29.45
	12/30/2003	1.20	NP	-	32.56
	3/29/2004	1.71	NP	-	32.05
	6/29/2004	2.98	NP	-	30.78
	9/27/2004	3.74	NP	-	30.02
	12/14/2004	Unable to Access, Due to Fuel Transfer Activities			
	3/7/2005	3.04	NP	-	30.72
	6/20/2005	2.48	NP	-	31.28
	9/19/2005	3.94	NP	-	29.82
	12/12/2005	2.39	NP	-	31.37
	3/13/2005	1.41	NP	-	32.35
	6/27/2006	2.45	NP	-	31.31
	9/25/2006	----- Cannot locate well -----			
	12/11/2006	----- Cannot locate well -----			
	3/19/2007	----- Cannot locate well -----			
	4/20/2007	----- Cannot locate well -----			
	6/18/2007	----- Cannot locate well -----			
	9/17/2002	----- Cannot locate well -----			
	12/17/2007	----- Cannot locate well -----			
	3/24/2008	----- Cannot locate well -----			
	6/23/2008	----- Cannot locate well -----			
	9/22/2008	3.88	NP	-	29.88

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-18</b>	1/5/2009	0.79	NP	-	32.97
	3/16/2009	1.58	NP	-	32.18
	6/15/2009	2.52	NP	-	31.24
	9/14/2009	3.70	NP	-	30.06
	12/21/2009	1.48	NP	-	32.28
	3/16/2010	1.51	NP	-	32.25
	6/21/2010	1.72	NP	-	32.04
	9/20/2010	2.69	NP	-	31.07
	12/14/2010	0.65	NP	-	33.11
	3/21/2011	0.99	NP	-	32.77
	6/8/2011	1.97	NP	-	31.79
	9/26/2011	3.50	NP	-	30.26
	12/12/2011	2.50	NP	-	31.26
	3/26/2012	1.21	NP	-	32.55
	6/26/2012	1.93	NP	-	31.83
	9/24/2012	3.43	NP	-	30.33
	12/17/2012	0.68	NP	-	33.08
	3/25/2013	2.04	NP	-	31.72
	6/17/2013	1.87	NP	-	31.89
	9/9/2013	2.82	NP	-	30.94
	12/4/2013	2.30	NP	-	31.46
	3/3/2014	1.09	NP	-	32.67
	6/13/2014	2.19	NP	-	31.57
	8/26/2014	2.94	NP	-	30.82
	12/8/2014	1.35	NP	-	32.41
	3/3/2015	1.86	NP	-	31.90
	<b>4/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>5/28/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>6/9/2015</b>	<b>2.50</b>	<b>NP</b>	-	<b>31.26</b>
	<b>7/31/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>8/19/2015</b>	<b>3.43</b>	<b>NP</b>	-	<b>30.33</b>
	<b>9/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
<b>MW-19</b>	2/14/2000	2.82	NP	-	30.57
(33.39)	5/22/2000	4.62	4.59	0.03	28.79
	8/23/2000	5.89	5.88	0.01	27.51
	11/28/2000	5.91	NP	-	27.48
	2/21/2001	5.03	5.03	sheen	28.36
	5/15/2001	4.09	4.09	sheen	29.30
	9/18/2001	7.27	7.23	0.04	26.15
	12/19/2001	2.72	NP	-	30.67
	3/13/2002	2.84	2.84	sheen	30.55
	6/24/2002	4.61	NP	-	28.78
	9/26/2002	6.42	NP	-	26.97
	12/20/2002	5.06	NP	-	28.33
	3/17/2003	2.59	NP	-	30.80
	6/26/2003	3.42	NP	-	29.97
	9/24/2003	6.51	6.48	0.03	26.90
	12/30/2003	2.84	NP	-	30.55
	3/29/2004	3.32	NP	-	30.07

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-19</b>	6/29/2004	5.34	5.34	sheen	28.05
	9/27/2004	6.04	6.04	sheen	27.35
	12/14/2004	4.18	NP	-	29.21
	3/7/2005	4.78	4.77	0.01	28.62
	6/20/2005	3.21	3.21	sheen	30.18
	9/19/2005	6.27	6.27	sheen	27.12
	12/12/2005	3.94	NP	-	29.45
	3/13/2006	2.70	2.70	sheen	30.69
	6/27/2006	3.39	3.39	sheen	30.00
	9/25/2006	6.15	6.15	sheen	27.24
	12/11/2006	3.08	NP	-	30.31
	3/19/2007	2.85	2.85	sheen	30.54
	4/20/2007	3.08	3.08	sheen	30.31
	6/18/2007	4.06	4.06	sheen	29.33
	9/17/2007	6.26	6.26	sheen	27.13
	12/17/2007	3.68	NP	-	29.71
	3/24/2008	2.84	NP	-	30.55
	6/23/2008	4.37	4.35	0.02	29.04
	9/22/2008	5.91	5.91	sheen	27.48
	1/5/2009	2.38	NP	-	31.01
	3/16/2009	3.71	NP	-	29.68
	6/15/2009	4.14	4.10	0.04	29.28
	9/14/2009	5.92	5.92	sheen	27.47
	12/21/2009	3.11	NP	-	30.28
	3/16/2010	2.57	NP	-	30.82
	6/21/2010	2.94	NP	-	30.45
	9/20/2010	4.42	4.40	0.02	28.99
	12/14/2010	1.58	NP	-	31.81
	3/21/2011	2.10	NP	-	31.29
	6/8/2011	3.26	NP	-	30.13
	9/26/2011	5.64	5.63	0.01	27.76
	12/12/2011	4.17	4.11	0.06	29.27
	3/26/2012	2.27	NP	sheen	31.12
	6/26/2012	3.03	3.03	sheen	30.36
	9/24/2012	5.27	5.24	0.03	28.14
	12/17/2012	1.82	1.81	-	31.57
	3/25/2013	3.59	3.57	0.02	29.82
	6/17/2013	3.48	3.46	0.02	29.93
	9/9/2013	4.63	4.63	sheen	28.76
	12/4/2013	4.20	4.20	sheen	29.19
	3/3/2014	3.00	3.00	sheen	30.39
	6/13/2014	3.72	3.71	0.01	29.68
	8/26/2014	4.40	4.39	0.01	29.00
	12/8/2014	3.26	3.23	0.03	30.15
	3/3/2015	3.30	3.26	0.04	30.12
	<b>6/9/2015</b>	<b>4.42</b>	<b>4.40</b>	<b>0.02</b>	<b>28.99</b>
	<b>8/19/2015</b>	<b>5.85</b>	<b>5.77</b>	<b>0.08</b>	<b>27.60</b>
<b>MW-20</b>	2/14/2000	9.80	NP	-	24.96
(34.76)	5/22/2000	10.23	NP	-	24.53

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-20</b>	8/23/2000	11.47	NP	-	23.29
	11/28/2000	11.45	NP	-	23.31
	2/21/2001	11.21	NP	-	23.55
	5/15/2001	11.20	NP	-	23.56
	9/18/2001	12.48	NP	-	22.28
	12/19/2001	10.21	NP	-	24.55
	3/13/2002	9.80	NP	-	24.96
	6/24/2002	10.71	NP	-	24.05
	9/26/2002	12.11	NP	-	22.65
	12/20/2002	11.91	NP	-	22.85
	3/17/2003	9.80	NP	-	24.96
	6/26/2003	10.83	NP	-	23.93
	9/24/2003	12.12	NP	-	22.64
	12/30/2003	10.61	NP	-	24.15
	3/29/2004	10.27	NP	-	24.49
	6/29/2004	11.31	NP	-	23.45
	9/27/2004	11.94	NP	-	22.82
	12/14/2004	11.48	NP	-	23.28
	3/7/2005	11.34	NP	-	23.42
	6/20/2005	10.58	NP	-	24.18
	9/19/2005	12.05	NP	-	22.71
	12/12/2005	11.28	NP	-	23.48
	3/13/2006	9.54	NP	-	25.22
	6/27/2006	10.45	NP	-	24.31
	9/25/2006	12.01	NP	-	22.75
	12/11/2006	10.27	NP	-	24.49
	3/19/2007	9.47	NP	-	25.29
	4/20/2007	10.00	NP	-	24.76
	4/20/2007	10.00	NP	-	24.76
	6/18/2007	10.75	NP	-	24.01
	9/17/2007	12.04	NP	-	22.72
	12/17/2007	10.37	NP	-	24.39
	3/24/2008	9.50	NP	-	25.26
	6/23/2008	10.39	NP	-	24.37
	9/22/2008	11.51	NP	-	23.25
	1/5/2009	9.29	NP	-	25.47
	3/16/2009	10.32	NP	-	24.44
	6/15/2009	10.44	NP	-	24.32
	9/14/2009	11.81	NP	-	22.95
	12/21/2009	10.34	NP	-	24.42
	3/16/2010	9.49	NP	-	25.27
	6/21/2010	9.08	NP	-	25.68
	9/20/2010	11.15	NP	-	23.61
	12/14/2010	8.65	NP	-	26.11
	3/21/2011	8.06	NP	-	26.70
	6/8/2011	9.12	NP	-	25.64
	9/26/2011	11.45	NP	-	23.31
	12/12/2011	10.66	NP	-	24.10
	3/26/2012	8.55	NP	-	26.21

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-20</b>	6/26/2012	9.43	NP	-	25.33
	9/24/2012	11.27	NP	-	23.49
	12/17/2012	8.73	NP	-	26.03
	3/25/2013	10.00	NP	-	24.76
	6/17/2013	9.83	NP	-	24.93
	9/9/2013	11.02	NP	-	23.74
	12/4/2013		--Unable to Access--		
	3/3/2014	4.52	NP	-	30.24
	6/13/2014	9.65	NP	-	25.11
	8/26/2014	10.75	NP	-	24.01
	12/8/2014	9.66	NP	-	25.10
	3/3/2015	9.40	NP	-	25.36
	<b>4/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>5/28/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>6/9/2015</b>	<b>10.20</b>	<b>NP</b>	-	24.56
	<b>7/31/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>8/19/2015</b>	<b>16.37</b>	<b>NP</b>	-	18.39
	<b>9/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
<b>MW-21</b>	2/14/2000	1.26	NP	-	33.07
(34.33)	5/22/2000	1.62	NP	-	32.71
	8/23/2000	2.38	NP	-	31.95
	11/28/2000	1.80	NP	-	32.53
	2/21/2001	1.64	NP	-	32.69
	5/15/2001	1.59	NP	-	32.74
	9/18/2001	3.01	NP	-	31.32
	12/19/2001	0.27	NP	-	34.06
	3/13/2002	0.99	NP	-	33.34
	6/24/2002	1.95	NP	-	32.38
	9/26/2002	3.65	NP	-	30.68
	12/20/2002	2.05	NP	-	32.28
	3/17/2003		Unable to Locate		
	6/26/2003		Unable to Access, Covered by Steel Plate		
	9/24/2003		Unable to Access, Covered by Steel Plate		
	12/30/2003		Unable to Access, Covered by Steel Plate		
	3/29/2004		Unable to Access, Covered by Steel Plate		
	6/29/2004		Unable to Access, Covered by Steel Plate		
	9/27/2004		Unable to Access, Covered by Steel Plate		
	12/14/2004		Unable to Access, Covered by Steel Plate		
	3/7/2005		Unable to Access, Covered by Steel Plate		
	6/20/2005		Unable to Access, Covered by Steel Plate		
	9/19/2005		Unable to Access, Covered by Steel Plate		
	12/12/2005		Unable to Access, Covered by Steel Plate		
	3/13/2006		Unable to Access, Covered by Steel Plate		
	6/27/2006		Unable to Access, Covered by Steel Plate		
	9/25/2006		Unable to Access, Covered by Steel Plate		
	12/11/2006		Unable to Access, Covered by Steel Plate		
	3/19/2007		Unable to Access, Covered by Steel Plate		
	6/18/2007		Unable to Access, Covered by Steel Plate		
	9/17/2007		Unable to Access, Covered by Steel Plate		

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-21</b>	12/17/2007		Unable to Access, Covered by Steel Plate		
	3/24/2008		Unable to Access, Covered by Steel Plate		
	6/23/2008		Unable to Access, Covered by Steel Plate		
	9/22/2008		Unable to Access, Covered by Steel Plate		
	1/5/2009		Unable to Access, Covered by Steel Plate		
	3/16/2009		Unable to Access, Covered by Steel Plate		
	6/15/2009		Unable to Access, Covered by Steel Plate		
	9/14/2009		Unable to Access, Covered by Steel Plate		
<b>MW-22</b>	2/14/2000	2.85	NP	-	32.80
	(35.65) 5/22/2000	4.28	NP	-	31.37
	8/23/2000	5.52	NP	-	30.13
	11/28/2000	6.50	NP	-	29.15
	2/21/2001	5.57	5.57	sheen	30.08
	5/15/2001	5.29	5.28	0.01	30.37
	9/19/2001	6.53	NP	-	29.12
	12/19/2001	3.56	NP	-	32.09
	3/13/2002	3.10	3.10	sheen	32.55
	6/24/2002	4.89	4.88	0.01	30.77
	9/26/2002	6.14	6.13	0.01	29.52
	12/20/2002	6.29	NP	-	29.36
	3/17/2003	3.81	3.81	sheen	31.84
	6/26/2003	4.56	NP	-	31.09
	9/24/2003	6.00	NP	-	29.65
	12/30/2003	4.60	NP	-	31.05
	3/29/2004	4.09	4.08	0.01	31.57
	6/29/2004	5.48	NP	-	30.17
	9/27/2004	5.79	5.79	sheen	29.86
	12/14/2004	5.60	NP	-	30.05
	3/7/2005	5.40	5.40	sheen	30.25
	6/20/2005	4.81	NP	-	30.84
	9/19/2005	6.03	6.03	sheen	29.62
	12/12/2005	4.37	4.37	sheen	31.28
	3/13/2006	3.44	NP	-	32.21
	6/27/2006	4.68	NP	-	30.97
	9/25/2006	5.99	NP	-	29.66
	12/11/2006	3.40	NP	-	32.25
	3/19/2007	3.31	NP	-	32.34
	6/18/2007	4.89	NP	-	30.76
	9/17/2007	6.35	6.35	sheen	29.30
	12/17/2007	4.17	NP	-	31.48
	3/24/2008	3.52	NP	-	32.13
	6/23/2008	4.83	NP	-	30.82
	9/22/2008	6.20	NP	-	29.45
	1/5/2009	3.70	NP	-	31.95
	3/16/2009	4.58	NP	-	31.07
	6/15/2009	4.92	NP	-	30.73
	9/14/2009	6.64	NP	-	29.01
	12/21/2009	4.27	NP	-	31.38
	3/16/2010	3.69	NP	-	31.96

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-22</b>	6/21/2010	3.65	NP	-	32.00
	9/20/2010	5.46	NP	-	30.19
	12/14/2010	2.32	NP	-	33.33
	3/21/2011	2.62	NP	-	33.03
	6/8/2011	4.63	NP	-	31.02
	9/26/2011	5.88	NP	-	29.77
	12/12/2011	5.31	NP	-	30.34
	3/26/2012	3.00	NP	-	32.65
	6/26/2012	4.09	NP	-	31.56
	9/24/2012	5.62	NP	-	30.03
	12/17/2012	3.13	NP	-	32.52
	3/25/2013	4.07	NP	-	31.58
	6/17/2013	4.37	NP	-	31.28
	9/9/2013	5.58	NP	-	30.07
	12/4/2013	5.54	NP	-	30.11
	3/3/2014	5.49	NP	-	30.16
	6/13/2014	5.20	NP	-	30.45
	8/26/2014	6.12	NP	-	29.53
	12/8/2014	4.87	4.87	sheen	30.78
	3/3/2015	4.71	NP	-	30.94
<b>4/29/2015</b>	<b>NM</b>	<b>NM</b>	-	-	<b>NM</b>
<b>5/28/2015</b>	<b>NM</b>	<b>NM</b>	-	-	<b>NM</b>
<b>6/9/2015</b>	<b>4.80</b>	<b>NP</b>	-	-	<b>30.85</b>
<b>7/31/2015</b>	<b>NM</b>	<b>NM</b>	-	-	<b>NM</b>
<b>8/19/2015</b>	<b>5.77</b>	<b>5.76</b>	0.01	-	<b>29.89</b>
<b>9/29/2015</b>	<b>NM</b>	<b>NM</b>	-	-	<b>NM</b>
<b>MW-23</b>	2/14/2000	3.56	NP	-	32.50
(36.06)	5/22/2000	5.63	NP	-	30.43
	8/23/2000	5.82	5.82	sheen	30.24
	11/28/2000	5.51	5.51	sheen	30.55
	2/21/2001	5.33	NP	-	30.73
	5/15/2001	5.01	5.01	sheen	31.05
	9/19/2001	6.50	6.49	0.01	29.57
	12/19/2001	4.19	NP	-	31.87
	3/13/2002	3.99	NP	-	32.07
	6/24/2002	5.44	NP	-	30.62
	9/26/2002	8.21	8.21	sheen	27.85
	12/20/2002	5.20	NP	-	30.86
	3/17/2003	4.47	NP	-	31.59
	6/26/2003	5.54	NP	-	30.52
	9/24/2003	6.35	6.35	sheen	29.71
	12/30/2003	4.41	NP	-	31.65
	3/29/2004	4.48	NP	-	31.58
	6/29/2004	6.58	6.58	sheen	29.48
	9/27/2004	5.91	5.91	sheen	30.15
	12/14/2004	5.05	NP	-	31.01
	3/7/2005	5.12	NP	-	30.94
	6/20/2005	5.19	NP	-	30.87
	9/19/2005	6.22	NP	-	29.84

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-23</b>	12/12/2005	5.09	NP	-	30.97
	3/13/2006	4.10	NP	-	31.96
	6/27/2006	5.14	5.14	sheen	30.92
	9/25/2006	6.31	6.31	sheen	29.75
	12/11/2006	4.41	NP	-	31.65
	3/19/2007	4.31	NP	-	31.75
	6/18/2007	5.20	5.20	sheen	30.86
	9/17/2007	6.27	6.27	sheen	29.79
	12/17/2007	4.72	4.72	sheen	31.34
	3/24/2008	4.04	NP	-	32.02
	6/23/2008	5.11	5.10	0.01	30.96
	9/22/2008	6.18	NP	-	29.88
	1/5/2009	4.14	4.14	sheen	31.92
	3/16/2009	4.58	NP	-	31.48
	6/15/2009	5.76	5.75	0.01	30.31
	9/14/2009	6.13	6.13	sheen	29.93
	12/21/2009	4.38	4.38	sheen	31.68
	3/16/2010	4.04	4.04	sheen	32.02
	6/21/2010	4.25	4.25	sheen	31.81
	9/20/2010	5.32	5.31	0.01	30.75
	12/14/2010	3.61	3.61	sheen	32.45
	3/21/2011	3.54	3.54	sheen	32.52
	6/8/2011	4.35	4.35	sheen	31.71
	9/26/2011	5.82	5.79	0.03	30.26
	12/12/2011	5.03	5.01	0.02	31.05
	3/26/2012	3.82	NP	sheen	32.24
	6/26/2012	3.32	3.32	sheen	32.74
	9/24/2012	5.67	5.67	sheen	30.39
	12/17/2012	3.71	NP	sheen	32.35
	3/25/2013	4.47	4.45	0.02	31.61
	6/17/2013	4.47	4.45	0.02	31.61
	9/9/2013	-	4.80	-	-
	12/4/2013	5.09	5.09	sheen	30.97
	3/3/2014	4.14	4.14	sheen	31.92
	6/13/2014	4.69	4.68	0.01	31.38
	8/26/2014	5.32	5.32	sheen	30.74
	12/8/2014	4.30	4.29	0.01	31.77
	3/3/2015	4.48	4.46	0.02	31.60
	<b>6/9/2015</b>	<b>5.11</b>	<b>5.10</b>	<b>0.01</b>	<b>30.96</b>
	<b>8/19/2015</b>	<b>5.92</b>	<b>5.91</b>	<b>0.01</b>	<b>30.15</b>
<b>MW-24</b>	2/14/2000	5.00	4.50	0.50	30.55
(35.15)	5/22/2000	5.34	5.21	0.13	29.91
	8/23/2000	8.56	NP	-	26.59
	11/28/2000	7.79	NP	-	27.36
	2/21/2001	7.20	7.15	0.05	27.99
	5/15/2001	5.45	5.45	sheen	29.70
	9/19/2001	9.55	9.54	0.01	25.61
	12/19/2001	5.30	4.84	0.46	30.22
	3/13/2002	6.78	6.78	sheen	28.37

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-24</b>	6/24/2002	6.80	6.79	0.01	28.36
	9/26/2002	8.86	8.86	sheen	26.29
	12/20/2002	6.34	6.35	0.01	28.82
	3/17/2003	4.78	4.70	0.08	30.43
	6/26/2003	6.51	6.51	sheen	28.64
	9/24/2003	8.35	NP	-	26.80
	12/30/2003	4.80	4.60	0.2*	30.51
	3/29/2004	5.35	5.33	0.02*	29.82
	6/29/2004	6.82	6.81	0.01	28.34
	9/27/2004	8.58	8.56	0.02	26.59
	12/14/2004	5.32	5.32	sheen	29.83
	3/7/2005	7.71	NP	-	27.44
	6/20/2005	5.39	5.36	0.03	29.78
	9/19/2005	-**	8.01	0.02	-
	12/12/2005	5.94	5.89	0.05	29.25
	3/13/2006	4.60	4.60	sheen	30.55
	6/27/2006	-**	5.71	-	-
	9/25/2006	-**	8.80	-	-
	12/11/2006	NM	NM	NM	NM
	3/19/2007	4.71	4.71	sheen	30.44
	4/20/2007	NM	4.86	-	-
	6/18/2007	NM	5.75	-	-
	9/17/2007	NM	8.70	-	-
	12/17/2007	NM	5.13	-	-
	3/24/2008	NM	4.53	-	-
	6/23/2008	NM	5.50	-	-
	9/22/2008	5.40	5.40	sheen	29.75
	1/5/2009	4.47	4.42	0.05	30.72
	3/16/2009	NM	4.95	-	-
	6/15/2009	5.57	5.55	0.02	29.60
	9/14/2009	8.46	8.45	0.01	26.70
	12/21/2009	4.75	4.74	0.01	30.41
	3/16/2010	4.62	4.62	sheen	30.53
	6/21/2010	4.79	4.77	0.02	30.38
	9/20/2010	-**	5.62	-	-
	12/14/2010	3.45	3.45	sheen	31.70
	3/21/2011	3.81	3.80	0.01	31.35
	6/8/2011	-**	4.81	-	-
	9/26/2011	-**	7.90	-	-
	12/12/2011	5.71	5.63	0.08	29.50
	3/26/2012	4.20	4.18	0.02	30.97
	6/26/2012	4.46	4.45	0.01	30.70
	9/24/2012	7.55	7.55	sheen	27.60
	12/17/2012	3.64	3.61	0.03	31.53
	3/25/2013	-	4.83	-	-
	6/17/2013	5.17	5.15	0.02	30.00
	9/9/2013	-	6.01		NM
	12/4/2013	5.55	5.55	sheen	29.60
	3/3/2014	4.12	4.12	sheen	31.03

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-24</b>	6/13/2014	5.31	5.30	0.01	29.85
	8/26/2014	6.42	6.41	0.01	28.74
	12/8/2014	4.74	4.73	0.01	30.42
	3/3/2015	5.06	5.03	0.03	30.11
	<b>4/29/2015</b>	<b>Too viscous</b>	<b>5.10</b>	-	<b>NM</b>
	<b>5/28/2015</b>	<b>5.63</b>	<b>5.62</b>	<b>0.01</b>	<b>29.53</b>
	<b>6/9/2015</b>	<b>Too viscous</b>	<b>5.72</b>	<b>0.01</b>	<b>NM</b>
	<b>7/31/2015</b>	<b>NM</b>	<b>7.10</b>	-	<b>NM</b>
	<b>8/19/2015</b>	<b>7.62</b>	<b>7.61</b>	<b>0.01</b>	<b>27.54</b>
	<b>9/29/2015</b>	<b>8.15</b>	<b>8.13</b>	<b>0.02</b>	<b>27.02</b>
<b>MW-25</b>	2/14/2000	10.03	NP	-	24.70
(34.73)	5/22/2000	11.66	NP	-	23.07
	8/23/2000	12.20	NP	-	22.53
	11/28/2000	12.34	NP	-	22.39
	2/21/2001	11.97	NP	-	22.76
	5/15/2001	11.91	NP	-	22.82
	9/19/2001	13.12	NP	-	21.61
	12/19/2001	10.45	NP	-	24.28
	3/13/2002	10.35	NP	-	24.38
	6/24/2002	11.38	NP	-	23.35
	9/26/2002	12.77	NP	-	21.96
	12/20/2002	12.14	NP	-	22.59
	3/17/2003	10.38	NP	-	24.35
	6/26/2003	11.60	NP	-	23.13
	9/24/2003	12.77	NP	-	21.96
	12/30/2003	11.00	NP	-	23.73
	3/29/2004	10.46	NP	-	24.27
	6/29/2004	11.93	NP	-	22.80
	9/27/2004	12.67	NP	-	22.06
	12/14/2004	12.52	NP	-	22.21
	3/7/2005	12.10	NP	-	22.63
	6/20/2005	11.40	NP	-	23.33
	9/19/2005	12.71	NP	-	22.02
	12/12/2005	11.52	NP	-	23.21
	3/13/2006	10.16	NP	-	24.57
	6/27/2006	11.21	NP	-	23.52
	9/25/2006	12.70	NP	-	22.03
	12/11/2006	10.97	NP	-	23.76
	3/19/2007	10.13	NP	-	24.60
	4/20/2007	10.51	NP	-	24.22
	6/18/2007	11.47	NP	-	23.26
	9/17/2007	12.72	NP	-	22.01
	12/17/2007	11.10	NP	-	23.63
	3/24/2008	10.22	NP	-	24.51
	6/23/2008	10.94	NP	-	23.79
	9/22/2008	12.49	NP	-	22.24
	1/5/2009	10.21	NP	-	24.52
	3/16/2009	11.04	NP	-	23.69
	6/15/2009	NM	NM	-	NM

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-25</b>	9/14/2009	12.43	NP	-	22.30
	12/21/2009	11.15	NP	-	23.58
	3/16/2010	10.08	NP	-	24.65
	6/21/2010	10.42	NP	-	24.31
	9/20/2010	12.44	NP	-	22.29
	12/14/2010	9.57	NP	-	25.16
	3/21/2011	8.94	NP	-	25.79
	6/8/2011	9.66	NP	-	25.07
	9/26/2011	12.08	NP	-	22.65
	12/12/2011	11.94	NP	-	22.79
	3/26/2012	9.28	NP	-	25.45
	6/26/2012	9.96	NP	-	24.77
	9/24/2012	11.89	NP	-	22.84
	12/17/2012	7.08	NP	-	27.65
	3/25/2013	10.59	NP	-	24.14
	6/17/2013	10.48	NP	-	24.25
	9/9/2013	11.59	NP	-	23.14
	12/4/2013	11.20	NP	-	23.53
	3/3/2014	10.16	NP	-	24.57
	6/13/2014	10.32	NP	-	24.41
	8/26/2014	11.35	NP	-	23.38
	12/8/2014	10.37	NP	-	24.36
	3/3/2015	20.11	NP	-	14.62
	<b>4/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>5/28/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>6/9/2015</b>	<b>11.13</b>	<b>NP</b>	-	23.60
	<b>7/31/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>8/19/2015</b>	<b>12.18</b>	<b>NP</b>	-	22.55
	<b>9/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
<b>MW-26</b>	2/14/2000	10.44	NP	-	24.34
(34.78)	5/22/2000	11.10	NP	-	23.68
	8/23/2000	12.55	NP	-	22.23
	11/28/2000	12.63	NP	-	22.15
	2/21/2001	12.33	12.33	sheen	22.45
	5/15/2001	12.24	NP	-	22.54
	9/19/2001	13.47	13.47	sheen	21.31
	12/19/2001	11.04	NP	-	23.74
	3/13/2002	10.91	10.91	sheen	23.87
	6/24/2002	11.88	NP	-	22.90
	9/26/2002	13.07	NP	-	21.71
	12/20/2002	12.55	NP	-	22.23
	3/17/2003	10.93	NP	-	23.85
	6/26/2003	12.00	NP	-	22.78
	9/24/2003	13.13	NP	-	21.65
	12/30/2003	11.53	NP	-	23.25
	3/29/2004	10.46	NP	-	24.32
	6/29/2004	12.43	NP	-	22.35
	9/27/2004	13.03	NP	-	21.75
	12/14/2004	12.30	NP	-	22.48

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-26</b>	3/7/2005	12.51	NP	-	22.27
	6/20/2005	11.78	NP	-	23.00
	9/19/2005	13.09	NP	-	21.69
	12/12/2005	11.95	NP	-	22.83
	3/13/2006	10.61	NP	-	24.17
	6/27/2006	11.65	NP	-	23.13
	9/25/2006	13.06	NP	-	21.72
	12/11/2006	11.46	NP	-	23.32
	3/19/2007	10.65	NP	-	24.13
	6/18/2007	11.86	NP	-	22.92
	9/17/2007	13.11	NP	-	21.67
	12/17/2007	11.58	NP	-	23.20
	1/22/2008	10.63	NP	-	24.15
	3/24/2008	10.72	NP	-	24.06
	6/23/2008	11.43	NP	-	23.35
	9/22/2008	12.89	NP	-	21.89
	1/5/2009	10.88	NP	-	23.90
	3/16/2009	11.52	NP	-	23.26
	6/15/2009	NM	NM	-	NM
	9/14/2009	12.84	NP	-	21.94
	12/21/2009	11.51	NP	-	23.27
	3/16/2010	10.61	NP	-	24.17
	6/21/2010	9.88	NP	-	24.90
	9/20/2010	12.23	NP	-	22.55
	12/14/2010	10.13	NP	-	24.65
	3/21/2011	9.54	NP	-	25.24
	6/8/2011	10.20	NP	-	24.58
	9/26/2011	12.50	NP	-	22.28
	12/12/2011	11.80	NP	-	22.98
	3/26/2012	9.87	NP	-	24.91
	6/26/2012	10.50	NP	-	24.28
	9/24/2012	12.32	NP	-	22.46
	12/17/2012	10.11	NP	-	24.67
	3/25/2013	11.03	NP	-	23.75
	6/17/2013	10.96	NP		23.82
	9/9/2013	12.00	NP		22.78
	12/4/2013	11.65	NP		23.13
	3/3/2014	10.71	NP		24.07
	6/13/2014	10.86	NP		23.92
	8/26/2014	11.78	NP		23.00
	12/8/2014	10.92	NP	-	23.86
	3/3/2015	10.68	NP	-	24.10
	<b>4/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>5/28/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>6/9/2015</b>	<b>11.36</b>	<b>NP</b>	-	<b>23.42</b>
	<b>7/31/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>8/19/2015</b>	<b>12.18</b>	<b>NP</b>	-	<b>22.55</b>
	<b>9/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-27</b>	2/14/2000	3.67	NP	-	32.02
(35.69)	5/22/2000	4.91	NP	-	30.78
	8/23/2000	6.15	NP	-	29.54
	11/28/2000	5.49	NP	-	30.20
	2/21/2001	5.64	NP	-	30.05
	5/15/2001	5.31	NP	-	30.38
	9/19/2001	6.68	NP	-	29.01
	12/19/2001	4.40	NP	-	31.29
	3/13/2002	3.97	NP	-	31.72
	6/24/2002	5.75	NP	-	29.94
	9/26/2002	6.50	NP	-	29.19
	12/20/2002	5.19	NP	-	30.50
	3/17/2003	4.46	NP	-	31.23
	6/26/2003	5.83	NP	-	29.86
	9/24/2003	6.60	NP	-	29.09
	12/30/2003	4.60	NP	-	31.09
	3/29/2004	4.83	NP	-	30.86
	6/29/2004	5.94	NP	-	29.75
	9/27/2004	6.07	NP	-	29.62
	12/14/2004	5.20	NP	-	30.49
	3/7/2005	5.78	NP	-	29.91
	6/20/2005	5.35	NP	-	30.34
	9/19/2005	6.32	NP	-	29.37
	12/12/2005	5.36	NP	-	30.33
	3/13/2006	4.32	NP	-	31.37
	6/27/2006	5.21	NP	-	30.48
	9/25/2006	6.45	NP	-	29.24
	12/11/2006	4.67	NP	-	31.02
	3/19/2007	4.70	NP	-	30.99
	6/18/2007	5.39	NP	-	30.30
	9/17/2007	6.41	NP	-	29.28
	12/17/2007	5.15	NP	-	30.54
	3/24/2008	4.27	NP	-	31.42
	6/23/2008	5.12	NP	-	30.57
	9/22/2008	6.15	NP	-	29.54
	1/5/2009	4.21	NP	-	31.48
	3/16/2009	4.73	NP	-	30.96
	6/15/2009	5.22	NP	-	30.47
	9/14/2009	6.00	NP	-	29.69
	12/21/2009	4.60	NP	-	31.09
	3/16/2010	4.39	NP	-	31.30
	6/21/2010	4.36	NP	-	31.33
	9/20/2010	5.32	NP	-	30.37
	12/14/2010	3.42	NP	-	32.27
	3/21/2011	3.63	NP	-	32.06
	6/8/2011	4.65	NP	-	31.04
	9/26/2011	6.00	NP	-	29.69
	12/12/2011	6.00	NP	-	29.69
	3/26/2012	3.86	NP	-	31.83

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-27</b>	6/26/2012	4.55	NP	-	31.14
	9/24/2012	9.01	NP	-	26.68
	12/17/2012	3.19	NP	-	32.50
	3/25/2013	4.76	NP	-	30.93
	6/17/2013	4.89	NP	-	30.80
	9/9/2013	5.23	NP	-	30.46
	12/4/2013	4.93	NP	-	30.76
	3/3/2014	3.73	NP	-	31.96
	6/13/2014	4.84	NP	-	30.85
	8/26/2014	5.53	NP	-	30.16
	12/8/2014	4.38	NP	-	31.31
	3/3/2015	4.84	NP	-	30.85
	<b>4/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>5/28/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>6/9/2015</b>	<b>5.16</b>	<b>NP</b>	-	30.53
	<b>7/31/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>8/19/2015</b>	<b>8.42</b>	<b>NP</b>	-	27.27
	<b>9/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
<b>MW-28</b>	2/14/2000	4.03	NP	-	30.36
(34.39)	5/22/2000	5.44	NP	-	28.95
	8/23/2000	9.55	NP	-	24.84
	11/28/2000	11.34	11.34	sheen	23.05
	2/21/2001	8.52	8.51	0.01	25.88
	5/15/2001	8.54	8.54	sheen	25.85
	9/19/2001	13.75	13.48	0.27	20.86
	12/19/2001	4.47	NP	-	29.92
	3/13/2002	4.49	4.49	sheen	29.90
	6/24/2002	7.34	NP	-	27.05
	9/26/2002	9.39	NP	-	25.00
	12/23/2002	7.12	7.11	0.01	27.28
	3/17/2003	4.68	4.66	0.02	29.73
	6/26/2003	7.15	7.15	sheen	27.24
	9/24/2003	13.25	13.21	0.04	21.17
	12/30/2003	5.87	NP	-	28.52
	3/29/2004	5.97	5.97	sheen	28.42
	6/29/2004	9.68	9.68	sheen	24.71
	9/27/2004	13.35	13.33	0.02	21.06
	12/14/2004	7.51	7.51	sheen	26.88
	3/7/2005	10.65	10.65	sheen	23.74
	6/20/2005	7.85	7.85	sheen	26.54
	9/19/2005	12.65	12.65	sheen	21.74
	12/12/2005	6.87	6.86	0.01	27.53
	3/13/2006	4.91	NP	-	29.48
	6/27/2006	6.95	NP	-	27.44
	9/25/2006	13.05	13.05	sheen	21.34
	12/11/2006	5.53	NP	-	28.86
	3/19/2007	5.40	NP	-	28.99
	6/18/2007	7.15	7.15	sheen	27.24
	9/17/2007	13.14	NP	-	21.25

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-28</b>	12/17/2007	5.76	5.75	0.01	28.64
	1/22/2008	5.00	4.98	0.02	29.41
	3/24/2008	4.80	NP	-	29.59
	6/23/2008	6.96	6.96	sheen	27.43
	9/22/2008	12.40	12.36	0.04	22.02
	1/5/2009	4.56	4.55	0.01	29.84
	3/16/2009	6.38	6.38	sheen	28.01
	6/15/2009	7.00	7.00	sheen	27.39
	9/14/2009	11.91	11.86	0.05	22.52
	12/21/2009	5.99	NP	-	28.40
	3/16/2010	5.01	5.01	sheen	29.38
	6/21/2010	5.24	5.24	sheen	29.15
	9/20/2010	7.09	7.09	sheen	27.30
	12/14/2010	4.13	4.13	sheen	30.26
	3/21/2011	4.50	4.50	sheen	29.89
	6/8/2011	5.82	NP	-	28.57
	9/26/2011	7.62	NP	-	26.77
	12/12/2011	6.44	6.39	0.05	27.99
	3/26/2012	4.15	NP	sheen	30.24
	6/26/2012	5.51	5.51	sheen	28.88
	9/24/2012	7.58	7.58	sheen	26.81
	12/17/2012	4.12	4.10	0.02	30.29
	3/25/2013	5.63	5.63	sheen	28.76
	6/17/2013	5.73	NP	-	28.66
	9/9/2013	6.63	NP	sheen	27.76
	12/4/2013	6.06	NP	-	28.33
	3/3/2014	5.20	5.20	sheen	29.19
	6/13/2014	6.54	NP	-	27.85
	8/26/2014	7.27	NP	-	27.12
	12/8/2014	5.25	5.23	0.02	29.16
	3/3/2015	6.07	NP	-	28.32
<b>MW-29</b>	<b>4/29/2015</b>	<b>6.03</b>	<b>NP</b>	-	28.36
	<b>5/28/2015</b>	<b>6.83</b>	<b>NP</b>	-	27.56
	<b>6/9/2015</b>	<b>6.96</b>	<b>NP</b>	-	27.43
	<b>7/31/2015</b>	<b>NM</b>	<b>NM</b>	-	NM
	<b>8/19/2015</b>	<b>7.45</b>	<b>NP</b>	sheen	26.94
	<b>9/29/2015</b>	<b>11.51</b>	<b>NM</b>	-	<b>NM</b>
<b>(35.77)</b>	2/14/2000	12.98	NP	-	22.79
	5/22/2000	13.49	NP	-	22.28
	8/23/2000	14.53	NP	-	21.24
	11/28/2000	14.84	NP	-	20.93
	2/21/2001	14.54	NP	-	21.23
	5/15/2001	14.52	NP	-	21.25
	9/19/2001	15.57	NP	-	20.20
	12/19/2001	13.59	NP	-	22.18
	3/13/2002	13.21	NP	-	22.56
	6/24/2002	13.94	NP	-	21.83
	9/26/2002	15.11	NP	-	20.66
	12/20/2002	14.79	NP	-	20.98

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-29</b>	3/17/2003	13.26	NP	-	22.51
	6/26/2003	13.93	NP	-	21.84
	9/24/2003	15.29	NP	-	20.48
	12/30/2003	13.99	NP	-	21.78
	3/29/2004	13.47	NP	-	22.30
	6/29/2004	14.48	NP	-	21.29
	9/27/2004	15.18	NP	-	20.59
	12/14/2004	14.56	NP	-	21.21
	3/7/2005	14.57	NP	-	21.20
	6/20/2005	13.96	NP	-	21.81
	9/19/2005	15.15	NP	-	20.62
	12/12/2005	14.10	NP	-	21.67
	3/13/2006	12.97	NP	-	22.80
	6/27/2006	13.70	NP	-	22.07
	9/25/2006	15.10	NP	-	20.67
	12/11/2006	13.65	NP	-	22.12
	3/19/2007	13.07	NP	-	22.70
	6/18/2007	13.93	NP	-	21.84
	9/17/2007	15.22	NP	-	20.55
	12/17/2007	13.86	NP	-	21.91
	1/22/2008	12.93	NP	-	22.84
	3/24/2008	13.08	NP	-	22.69
	6/23/2008	13.60	NP	-	22.17
	9/22/2008	15.02	NP	-	20.75
	1/5/2009	13.44	NP	-	22.33
	3/16/2009	13.71	NP	-	22.06
	6/15/2009	13.73	NP	-	22.04
	9/14/2009	14.96	NP	-	20.81
	12/21/2009	13.87	NP	-	21.90
	3/16/2010	13.15	NP	-	22.62
	6/21/2010	12.82	NP	-	22.95
	9/20/2010	14.37	NP	-	21.40
	12/14/2010	12.68	NP	-	23.09
	3/21/2011	12.21	NP	-	23.56
	6/8/2011	12.61	NP	-	23.16
	9/26/2011	14.51	NP	-	21.26
	12/12/2011	14.56	NP	-	21.21
	3/26/2012	12.48	NP	-	23.29
	6/26/2012	12.76	NP	-	23.01
	9/24/2012	14.40	NP	-	21.37
	12/17/2012	12.75	NP	-	23.02
	3/25/2013	13.44	NP	-	22.33
	6/17/2013	13.35	NP	-	22.42
	9/9/2013	14.19	NP	-	21.58
	12/4/2013	13.96	NP	-	21.81
	3/3/2014	13.31	NP	-	22.46
	6/13/2014	13.24	NP	-	22.53
	8/26/2014	14.05	NP	-	21.72
	12/8/2014	13.39	NP	-	22.38

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-29</b>	3/3/2015	13.06	NP	-	22.71
	<b>4/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>5/28/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>6/9/2015</b>	<b>13.78</b>	<b>NP</b>	-	21.99
	<b>7/31/2015</b>	<b>NM</b>	<b>NM</b>	-	NM
	<b>8/19/2015</b>	<b>14.71</b>	<b>NP</b>	-	21.06
	<b>9/29/2015</b>	<b>NM</b>	<b>NM</b>	-	NM
<b>MW-30</b>	2/14/2000	3.97	NP	-	32.42
	(36.39)	5.37	NP	-	31.02
	8/23/2000	7.06	NP	-	29.33
	11/28/2000	7.34	NP	-	29.05
	2/21/2001	6.74	NP	-	29.65
	5/15/2001	6.50	NP	-	29.89
	9/19/2001	8.28	NP	-	28.11
	12/19/2001	4.35	NP	-	32.04
	3/13/2002	4.31	NP	-	32.08
	6/24/2002	6.28	NP	-	30.11
	9/26/2002	7.64	NP	-	28.75
	12/20/2002	7.11	NP	-	29.28
	3/17/2003	4.72	NP	-	31.67
	6/26/2003	6.14	NP	-	30.25
	9/24/2003	7.85	NP	-	28.54
	12/30/2003	4.87	NP	-	31.52
	3/29/2004	5.21	NP	-	31.18
	6/29/2004	6.71	NP	-	29.68
	9/27/2004	7.71	NP	-	28.68
	12/14/2004	6.60	NP	-	29.79
	3/7/2005	6.81	NP	-	29.58
	6/20/2005	5.85	NP	-	30.54
	9/19/2005	7.39	NP	-	29.00
	12/12/2005	5.66	NP	-	30.73
	3/13/2006	4.55	NP	-	31.84
	6/27/2006	5.81	NP	-	30.58
	9/25/2006	7.51	NP	-	28.88
	12/11/2006	4.92	NP	-	31.47
	3/19/2007	4.80	NP	-	31.59
	6/18/2007	6.05	NP	-	30.34
	9/17/2007	7.65	NP	-	28.74
	12/17/2007	5.23	NP	-	31.16
	3/24/2008	4.44	NP	-	31.95
	6/23/2008	5.79	NP	-	30.60
	9/22/2008	7.33	NP	-	29.06
	1/5/2009	4.05	NP	-	32.34
	3/16/2009	5.00	NP	-	31.39
	6/15/2009	8.84	NP	-	27.55
	9/14/2009	7.28	NP	-	29.11
	12/21/2009	4.15	NP	-	32.24
	3/16/2010	4.68	NP	-	31.71
	6/21/2010	4.85	NP	-	31.54

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-30</b>	9/20/2010	6.13	NP	-	30.26
	12/14/2010	3.44	NP	-	32.95
	3/21/2011	3.89	NP	-	32.50
	6/8/2011	5.13	NP	-	31.26
	9/26/2011	6.99	NP	-	29.40
	12/12/2011	6.31	NP	-	30.08
	3/26/2012	4.10	NP	-	32.29
	6/26/2012	5.06	NP	-	31.33
	9/24/2012	6.87	NP	-	29.52
	12/17/2012	3.05	NP	-	33.34
	3/25/2013	5.11	NP	-	31.28
	6/17/2013	5.18	NP	-	31.21
	9/9/2013	5.65	NP	-	30.74
	12/4/2013	5.48	NP	-	30.91
	3/3/2014	4.52	NP	-	31.87
	6/13/2014	5.37	NP	-	31.02
	8/26/2014	6.36	NP	-	30.03
	12/8/2014	4.94	NP	-	31.45
	3/3/2015	5.10	NP	-	31.29
	<b>4/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>5/28/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>6/9/2015</b>	<b>5.89</b>	<b>NP</b>	-	<b>30.50</b>
	<b>7/31/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>8/19/2015</b>	<b>7.17</b>	<b>NP</b>	<b>sheen</b>	<b>29.22</b>
	<b>9/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
<b>MW-31</b>	2/14/2000	5.19	NP	-	30.47
(35.66)	5/22/2000	6.66	NP	-	29.00
	8/23/2000	8.41	NP	-	27.25
	11/28/2000	8.86	NP	-	26.80
	2/21/2001	8.07	NP	-	27.59
	5/15/2001	7.90	NP	-	27.76
	9/19/2001	9.69	NP	-	25.97
	12/19/2001	5.43	NP	-	30.23
	3/13/2002	5.31	NP	-	30.35
	6/24/2002	7.67	NP	-	27.99
	9/26/2002	9.09	9.06	0.03	26.59
	12/20/2002	8.89	NP	-	26.77
	3/17/2003	6.12	6.12	sheen	29.54
	6/26/2003	7.58	NP	-	28.08
	9/24/2003	9.54	9.45	0.09	26.19
	12/30/2003	6.20	NP	-	29.46
	3/29/2004	6.49	NP	-	29.17
	6/29/2004	8.31	8.31	sheen	27.35
	9/27/2004	9.38	9.38	sheen	26.28
	12/14/2004	8.55	NP	-	27.11
	3/7/2005	8.43	NP	-	27.23
	6/20/2005	7.43	7.43	sheen	28.23
	9/19/2005	9.02	NP	-	26.64
	12/12/2005	6.99	NP	-	28.67

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-31</b>	3/13/2006	5.61	NP	-	30.05
	6/27/2006	7.19	7.19	sheen	28.47
	9/25/2006	9.34	9.26	0.08	26.38
	12/11/2006	5.85	5.85	sheen	29.81
	3/19/2007	5.00	5.00	sheen	30.66
	6/18/2007	7.58	7.58	sheen	28.08
	9/17/2007	9.53	9.35	0.18	26.27
	12/17/2007	6.50	NP	-	29.16
	1/22/2008	5.77	5.77	sheen	29.89
	3/24/2008	5.71	NP	-	29.95
	6/23/2008	7.31	NP	-	28.35
	9/22/2008	9.06	9.05	0.01	26.61
	1/5/2009	5.34	5.34	sheen	30.32
	3/16/2009	6.01	NP	-	29.65
	6/15/2009	7.23	NP	-	28.43
	9/14/2009	8.91	NP	-	26.75
	12/21/2009	6.18	NP	-	29.48
	3/16/2010	5.81	5.81	sheen	29.85
	6/21/2010	5.90	5.89	0.01	29.77
	9/20/2010	7.74	NP	-	27.92
	12/14/2010	4.45	NP	-	31.21
	3/21/2011	5.11	NP	-	30.55
	6/8/2011	6.28	NP	-	29.38
	9/26/2011	5.65	NP	-	30.01
	12/12/2011	7.21	NP	-	28.45
	3/26/2012	5.41	NP	-	30.25
	6/26/2012	6.31	NP	-	29.35
	9/24/2012	8.59	NP	-	27.07
	12/17/2012	4.52	NP	-	31.14
	3/25/2013	6.32	NP	-	29.34
	6/17/2013	6.48	NP	-	29.18
	9/9/2013	7.33	NP	-	28.33
	12/4/2013	7.15	NP	-	28.51
	3/3/2014	5.75	NP	-	29.91
	6/13/2014	6.88	NP	-	28.78
	8/26/2014	8.08	NP	-	27.58
	12/8/2014	6.32	NP	-	29.34
	3/3/2015	6.46	NP	-	29.20
	<b>4/29/2015</b>	<b>6.53</b>	<b>NP</b>	-	<b>29.13</b>
	<b>5/28/2015</b>	<b>7.38</b>	<b>NP</b>	-	<b>28.28</b>
	<b>6/9/2015</b>	<b>5.89</b>	<b>NP</b>	-	<b>29.77</b>
	<b>7/31/2015</b>	<b>8.61</b>	<b>NM</b>	-	<b>27.05</b>
	<b>8/19/2015</b>	<b>8.94</b>	<b>NP</b>	-	<b>26.72</b>
	<b>9/29/2015</b>	<b>9.47</b>	<b>NP</b>	-	<b>26.19</b>
<b>MW-32</b>	2/14/2000	3.57	NP	-	33.44
(37.01)	5/22/2000	4.83	NP	-	32.18
	8/23/2000	6.41	NP	-	30.60
	11/28/2000	6.69	NP	-	30.32
	2/21/2001	6.11	NP	-	30.90

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-32</b>	5/15/2001	5.99	NP	-	31.02
	9/19/2001	7.64	NP	-	29.37
	12/19/2001	4.30	NP	-	32.71
	3/13/2002	3.71	NP	-	33.30
	6/24/2002	5.72	NP	-	31.29
	9/26/2002	7.18	NP	-	29.83
	12/20/2002	6.72	NP	-	30.29
	3/17/2003	4.15	4.15	sheen	32.86
	6/26/2003	5.53	NP	-	31.48
	9/24/2003	7.28	NP	-	29.73
	12/30/2003	4.58	NP	-	32.43
	3/29/2004	4.65	NP	-	32.36
	6/29/2004	6.25	NP	-	30.76
	9/27/2004	7.16	NP	-	29.85
	12/14/2004	6.28	NP	-	30.73
	3/7/2005	6.32	NP	-	30.69
	6/20/2005	5.42	NP	-	31.59
	9/19/2005	6.91	NP	-	30.10
	12/12/2005	5.21	NP	-	31.80
	3/13/2006	3.99	NP	-	33.02
	6/27/2006	5.32	NP	-	31.69
	9/25/2006	7.05	NP	-	29.96
	12/11/2006	4.41	NP	-	32.60
	3/19/2007	4.00	NP	-	33.01
	6/18/2007	5.68	NP	-	31.33
	9/17/2007	7.26	NP	-	29.75
	12/17/2007	5.00	NP	-	32.01
	3/24/2008	4.08	NP	-	32.93
	6/23/2008	5.51	NP	-	31.50
	9/22/2008	7.05	NP	-	29.96
	1/5/2009	4.14	NP	-	32.87
	3/16/2009	4.90	NP	-	32.11
	6/15/2009	6.51	NP	-	30.50
	9/14/2009	6.81	NP	-	30.20
	12/21/2009	5.07	NP	-	31.94
	3/16/2010	4.32	NP	-	32.69
	6/21/2010	4.39	NP	-	32.62
	9/20/2010	5.04	NP	-	31.97
	12/14/2010	3.39	NP	-	33.62
	3/21/2011	3.41	NP	-	33.60
	6/8/2011	4.67	NP	-	32.34
	9/26/2011	6.61	NP	-	30.40
	12/12/2011	6.29	NP	-	30.72
	3/26/2012	3.72	NP	-	33.29
	6/26/2012	4.75	NP		32.26
	9/24/2012	6.76	NP	-	30.25
	12/17/2012	3.56	NP	-	33.45
	3/25/2013	4.95	NP	-	32.06
	6/17/2013	4.96	NP	-	32.05

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-32</b>	9/9/2013	5.74	NP	-	31.27
	12/4/2013	5.63	NP	-	31.38
	3/3/2014	4.77	NP	-	32.24
	6/13/2014	5.10	NP	-	31.91
	8/26/2014	6.20	NP	-	30.81
	12/8/2014	5.07	NP	-	31.94
	3/3/2015	4.84	NP	-	32.17
	<b>4/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>5/28/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>6/9/2015</b>	<b>5.70</b>	<b>NP</b>	-	<b>31.31</b>
	<b>7/31/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>8/19/2015</b>	<b>6.91</b>	<b>NP</b>	-	<b>30.10</b>
	<b>9/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
<b>MW-33</b>	2/14/2000	19.59	NP	-	19.75
(39.34)	5/22/2000	20.15	NP	-	19.19
	8/23/2000	20.88	NP	-	18.46
	11/28/2000	20.98	NP	-	18.36
	2/21/2001	20.78	NP	-	18.56
	5/15/2001	20.83	NP	-	18.51
	9/19/2001	21.43	NP	-	17.91
	12/19/2001	12.62	NP	-	26.72
	3/13/2002	19.61	NP	-	19.73
	6/24/2002	20.42	NP	-	18.92
	9/26/2002	21.13	NP	-	18.21
	12/20/2002	20.66	NP	-	18.68
	3/17/2003	19.73	NP	-	19.61
	6/26/2003	20.31	NP	-	19.03
	9/24/2003	21.04	NP	-	18.30
	12/30/2003	19.82	NP	-	19.52
	3/29/2004	19.89	NP	-	19.45
	6/29/2004	20.65	NP	-	18.69
	9/27/2004	21.16	NP	-	18.18
	12/14/2004	20.60	NP	-	18.74
	3/7/2005	20.57	NP	-	18.77
	6/20/2005	20.32	NP	-	19.02
	9/19/2005	21.05	NP	-	18.29
	12/12/2005	20.20	NP	-	19.14
	3/13/2006	19.54	NP	-	19.80
	6/27/2006	20.11	NP	-	19.23
	9/25/2006	20.96	NP	-	18.38
	12/11/2006	19.84	NP	-	19.50
	3/19/2007	19.58	NP	-	19.76
(39.33)	6/18/2007	20.27	NP	-	19.06
	9/17/2007	20.98	NP	-	18.35
	12/17/2007	19.92	NP	-	19.41
	1/22/2008	19.35	NP	-	19.98
	3/24/2008	19.66	NP	-	19.67
	6/23/2008	20.02	NP	-	19.31
	9/22/2008	20.83	NP	-	18.50

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-33</b>	1/5/2009	19.19	NP	-	20.14
	3/16/2009	20.00	NP	-	19.33
	6/15/2009	20.16	NP	-	19.17
	9/14/2009	20.84	NP	-	18.49
	12/21/2009	20.00	NP	-	19.33
	3/16/2010	19.55	NP	-	19.78
	6/21/2010	19.41	NP	-	19.92
	9/20/2010	20.34	NP	-	18.99
	12/14/2010	19.11	NP	-	20.22
	3/21/2011	18.81	NP	-	20.52
	6/8/2011	18.68	NP	-	20.65
	9/26/2011	20.46	NP	-	18.87
	12/12/2011	20.72	NP	-	18.61
	3/26/2012	18.97	NP	-	20.36
	6/26/2012	19.56	NP		19.77
	9/24/2012	20.33	NP	-	19.00
	12/17/2012	19.17	NP	-	20.16
	3/25/2013	19.79	NP	-	19.54
	6/17/2013	19.89	NP	-	19.44
	9/9/2013	20.38	NP	-	18.95
	12/4/2013	20.05	NP	-	19.28
	3/3/2014	19.51	NP	-	19.82
	6/13/2014	19.67	NP	-	19.66
	8/26/2014	20.27	NP	-	19.06
	12/8/2014	19.76	NP	-	19.57
	3/3/2015	19.46	NP	-	19.87
	<b>4/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>5/28/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>6/9/2015</b>	<b>19.90</b>	<b>NP</b>	-	<b>19.43</b>
	<b>7/31/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>8/19/2015</b>	<b>20.54</b>	<b>NP</b>	-	<b>18.79</b>
	<b>9/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
<b>MW-34</b>	2/14/2000	19.31	NP	-	20.36
(39.67)	5/22/2000	19.75	NP	-	19.92
	8/23/2000	20.88	NP	-	18.79
	11/28/2000	20.39	NP	-	19.28
	2/21/2001	20.19	NP	-	19.48
	5/15/2001	20.18	NP	-	19.49
	9/19/2001	20.60	NP	-	19.07
	12/19/2001	19.20	NP	-	20.47
	3/13/2002	19.37	NP	-	20.30
	6/24/2002	19.95	NP	-	19.72
	9/26/2002	20.41	NP	-	19.26
	3/17/2003	19.39	NP	-	20.28
	6/26/2003	19.85	NP	-	19.82
	9/24/2003	20.39	NP	-	19.28
	12/30/2003	19.57	NP	-	20.10
	3/29/2004	19.54	NP	-	20.13
	6/29/2004	20.11	NP	-	19.56

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-34</b>	9/27/2004	20.46	NP	-	19.21
	12/14/2004	20.15	NP	-	19.52
	3/7/2005	20.00	NP	-	19.67
	6/20/2005	19.84	NP	-	19.83
	9/19/2005	20.37	NP	-	19.30
	12/12/2005	19.71	NP	-	19.96
	3/13/2006	19.30	NP	-	20.37
	6/27/2006	19.80	NP	-	19.87
	9/25/2006	20.33	NP	-	19.34
	12/11/2006	19.50	NP	-	20.17
	3/19/2007	19.27	NP	-	20.40
(39.64)	6/18/2007	19.87	NP	-	19.77
	9/17/2007	20.32	NP	-	19.32
	12/17/2007	19.51	NP	-	20.13
	1/22/2008	19.02	NP	-	20.62
	3/24/2008	19.35	NP	-	20.29
	6/23/2008	19.68	NP	-	19.96
	9/22/2008	20.20	NP	-	19.44
	1/5/2009	18.73	NP	-	20.91
	3/16/2009	19.68	NP	-	19.96
	6/15/2009	19.70	NP	-	19.94
	9/14/2009	20.17	NP	-	19.47
	12/21/2009	22.58	NP	-	17.06
	3/16/2010	19.24	NP	-	20.40
	6/21/2010	19.08	NP	-	20.56
	9/20/2010	19.87	NP	-	19.77
	12/14/2010	18.65	NP	-	20.99
	3/21/2011	18.48	NP	-	21.16
	6/8/2011	19.26	NP	-	20.38
	9/26/2011	19.98	NP	-	19.66
	12/12/2011	20.25	NP	-	19.39
	3/26/2012	18.62	NP	-	21.02
	6/26/2012	19.28	NP	-	20.36
	9/24/2012	19.92	NP	-	19.72
	12/17/2012	18.94	NP	-	20.70
	3/25/2013	19.43	NP	-	20.21
	12/4/2013	19.68	NP	-	19.96
	3/3/2014	19.20	NP	-	20.44
	6/13/2014	19.32	NP	-	20.32
	8/26/2014	19.72	NP	-	19.92
	12/8/2014	19.37	NP	-	20.27
	3/3/2015	19.20	NP	-	20.44
	<b>4/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>5/28/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>6/9/2015</b>	<b>19.56</b>	<b>NP</b>	-	<b>20.08</b>
	<b>7/31/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>8/19/2015</b>	<b>19.97</b>	<b>NP</b>	-	<b>19.67</b>
	<b>9/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-35</b>	2/14/2000	2.34	NP	-	31.05
(33.39)	5/22/2000	3.21	NP	-	30.18
	8/23/2000	4.98	NP	-	28.41
	11/28/2000	5.54	NP	-	27.85
	2/21/2001	4.67	NP	-	28.72
	5/15/2001	4.35	NP	-	29.04
	9/18/2001	6.33	NP	-	27.06
	12/19/2001	5.84	NP	-	27.55
	3/13/2002	2.61	NP	-	30.78
	6/24/2002		--Unable to Locate--		
	9/26/2002	5.85	NP	-	27.54
	12/20/2002	5.91	5.91	sheen	27.48
	3/17/2003	3.44	NP	-	29.95
	6/26/2003	3.83	NP	-	29.56
	9/24/2003	5.85	NP	-	27.54
	12/30/2003	3.58	NP	-	29.81
	3/29/2004	2.97	NP	-	30.42
	6/29/2004	2.50	NP	-	30.89
	9/27/2004	5.55	NP	-	27.84
	12/14/2004	4.91	NP	-	28.48
	3/7/2005	4.85	NP	-	28.54
	6/20/2005	4.13	NP	-	29.26
	9/19/2005	5.51	NP	-	27.88
	12/12/2005	4.02	NP	-	29.37
	3/13/2006	2.69	NP	-	30.70
	6/27/2006	3.64	NP	-	29.75
	9/25/2006	5.50	NP	-	27.89
	12/11/2006	3.35	NP	-	30.04
	3/19/2007	2.81	NP	-	30.58
	4/20/2007	3.06	NP	-	30.33
	6/18/2007	3.98	NP	-	29.41
	9/17/2007	6.60	6.60	sheen	26.79
	12/17/2007	3.51	NP	-	29.88
	1/22/2008	3.73	NP	-	29.66
	3/24/2008	2.68	NP	-	30.71
	6/23/2008	3.91	NP	-	29.48
	9/22/2008	5.53	NP	-	27.86
	1/5/2009	2.02	NP	-	31.37
	3/16/2009	4.85	NP	-	28.54
	6/15/2009	3.97	NP	-	29.42
	9/14/2009	5.41	NP	-	27.98
	12/21/2009	2.98	NP	-	30.41
	3/16/2010	2.74	NP	-	30.65
	6/21/2010	2.66	NP	-	30.73
	9/20/2010	4.66	NP	-	28.73
	12/14/2010	1.75	NP	-	31.64
	3/21/2011	1.94	NP	-	31.45
	6/8/2011	3.15	NP	-	30.24
	9/26/2011	5.13	NP	-	28.26

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-35</b>	12/12/2011	4.41	NP	-	28.98
	3/26/2012	2.18	NP	-	31.21
	6/26/2012	3.20	NP	-	30.19
	9/24/2012	5.02	NP	-	28.37
	12/17/2012	2.36	NP	-	31.03
	3/25/2013	2.89	NP	-	30.50
	12/4/2013	4.41	NP	-	28.98
	3/3/2014	3.32	NP	-	30.07
	6/13/2014	3.03	NP	-	30.36
	8/26/2014	3.99	NP	-	29.40
	12/8/2014	3.10	NP	-	30.29
	3/3/2015	2.09	NP	-	31.30
	<b>4/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>5/28/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>6/9/2015</b>	<b>2.60</b>	<b>NP</b>	-	<b>30.79</b>
	<b>7/31/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>8/19/2015</b>	<b>4.68</b>	<b>NP</b>	-	<b>28.71</b>
	<b>9/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
<b>MW-36</b>	2/14/2000	14.04	NP	-	20.84
(34.88)	5/22/2000	14.62	NP	-	20.26
	8/23/2000	15.39	NP	-	19.49
	11/28/2000	15.72	NP	-	19.16
	2/21/2001	15.49	NP	-	19.39
	5/15/2001	15.51	NP	-	19.37
	9/19/2001	16.08	NP	-	18.80
	12/20/2001	14.98	NP	-	19.90
	3/13/2002	14.18	NP	-	20.70
	6/24/2002	--Unable to Access--			
	9/26/2002	17.92	NP	-	16.96
	12/20/2002	15.59	NP	-	19.29
	3/17/2003	14.25	NP	-	20.63
	6/26/2003	--Unable to Access--			
	9/24/2003	15.74	NP	-	19.14
	12/30/2003	14.97	NP	-	19.91
	3/29/2004	14.37	NP	-	20.51
	6/29/2004	15.33	NP	-	19.55
	9/27/2004	15.87	NP	-	19.01
	12/14/2004	15.54	NP	-	19.34
	3/7/2005	--Unable to Access--			
	6/20/2005	14.98	NP	-	19.90
	9/19/2005	15.75	NP	-	19.13
	12/12/2005	15.01	NP	-	19.87
	3/13/2006	13.82	NP	-	21.06
	6/27/2006	14.78	NP	-	20.10
	9/25/2006	15.61	NP	-	19.27
	12/11/2006	14.45	NP	-	20.43
	3/19/2007	13.98	NP	-	20.90
(35.00)	6/18/2007	14.88	NP	-	20.12
	9/17/2007	15.70	NP	-	19.30

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-36</b>	12/17/2007	14.70	NP	-	20.30
	1/22/2008	13.77	NP	-	21.23
	3/24/2008	14.07	NP	-	20.93
	6/23/2008	14.67	NP	-	20.33
	9/22/2008	15.50	NP	-	19.50
	1/5/2009	14.13	NP	-	20.87
	3/16/2009	14.68	NP	-	20.32
	6/15/2009	14.76	NP	-	20.24
	9/14/2009	14.49	NP	-	20.51
	12/21/2009	14.81	NP	-	20.19
	3/16/2010	14.03	NP	-	20.97
	6/21/2010	13.82	NP	-	21.18
	9/20/2010	15.62	NP	-	19.38
	12/14/2010		--Unable to Access--		
	3/21/2011	13.06	NP	-	21.94
	6/8/2011	14.11	NP	-	20.89
	9/26/2011	15.09	NP	-	19.91
	12/12/2011	14.76	NP	-	20.24
	3/26/2012	13.43	NP	-	21.57
	6/26/2012	13.97	NP	-	21.03
	9/24/2012	15.05	NP	-	19.95
	12/17/2012	13.75	NP	-	21.25
	3/25/2013	14.29	NP	-	20.71
	12/4/2013	14.80	NP	-	20.20
	3/3/2014	14.13	NP	-	20.87
	6/13/2014	14.08	NP	-	20.92
	8/26/2014	14.83	NP	-	20.17
	12/8/2014	14.44	NP	-	20.56
	3/3/2015	13.92	NP	-	21.08
	<b>4/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>5/28/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>6/9/2015</b>	<b>14.51</b>	<b>NP</b>	-	<b>20.49</b>
	<b>7/31/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>8/19/2015</b>	<b>15.08</b>	<b>NP</b>	-	<b>19.92</b>
	<b>9/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
<b>MW-37</b>	2/14/2000	14.71	NP	-	20.15
(34.86)	5/22/2000	15.27	NP	-	19.59
	8/23/2000	16.06	NP	-	18.80
	11/28/2000	16.32	NP	-	18.54
	2/21/2001	16.10	NP	-	18.76
	5/15/2001	16.11	NP	-	18.75
	9/19/2001	16.69	NP	-	18.17
	12/19/2001	15.10	NP	-	19.76
	3/13/2002	14.64	14.62	0.02	20.24
	6/24/2002	15.66	NP	-	19.20
	9/26/2002	16.39	NP	-	18.47
	12/20/2002	16.11	16.11	sheen	18.75
	3/17/2003	14.92	NP	-	19.94
	6/26/2003		--Unable to Acess--		

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-37</b>	9/24/2003	16.40	16.37	0.03	18.48
	12/30/2003	15.35	NP	NP	19.51
	3/29/2004	14.93	14.94	0.01	19.94
	6/29/2004	15.96	15.96	sheen	18.90
	9/27/2004	16.52	16.51	0.01	18.35
	12/14/2004	16.10	NP	-	18.76
	3/7/2005	16.07	NP	-	18.79
	6/20/2005	15.60	NP	-	19.26
	9/19/2005	16.34	NP	-	18.52
	12/12/2005	15.59	NP	-	19.27
	3/13/2006	14.21	NP	-	20.65
	6/27/2006	15.29	NP	-	19.57
	9/25/2006	16.19	NP	-	18.67
	12/11/2006	15.04	NP	-	19.82
	3/19/2007	14.44	NP	-	20.42
(34.97)	6/18/2007	15.54	NP	-	19.43
	9/17/2007	16.34	NP	-	18.63
	12/17/2007	15.22	NP	-	19.75
	1/22/2008	14.26	NP	-	20.71
	3/24/2008	14.51	NP	-	20.46
	6/23/2008	15.25	NP	-	19.72
	9/22/2008	16.09	NP	-	18.88
	1/5/2009	14.69	NP	-	20.28
	3/16/2009	15.21	NP	-	19.76
	6/15/2009	15.37	NP	-	19.60
	9/14/2009	16.11	NP	-	18.86
	12/21/2009	15.32	NP	-	19.65
	3/16/2010	14.51	NP	-	20.46
	6/21/2010	14.14	NP	-	20.83
	9/20/2010	14.59	NP	-	20.38
	12/14/2010	14.21	NP	-	20.76
	3/21/2011	13.52	NP	-	21.45
	6/8/2011	14.55	NP	-	20.42
	9/26/2011	15.62	NP	-	19.35
	12/12/2011	15.26	NP	-	19.71
	3/26/2012	13.83	NP	-	21.14
	6/26/2012	14.35	NP	-	20.62
	9/24/2012	15.54	NP	-	19.43
	12/17/2012	14.25	NP	-	20.72
	3/25/2013	14.76	NP	-	20.21
	6/17/2013	14.76	NP	-	20.21
	9/9/2013	15.59	NP	-	19.38
	12/4/2013	15.39	NP	-	19.58
	3/3/2014	14.61	NP	-	20.36
	6/13/2014	14.40	NP	-	20.57
	8/26/2014	15.18	NP	-	19.79
	12/8/2014	14.99	NP	-	19.98
	3/3/2015	14.18	NP	-	20.79
	<b>4/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-37</b>	<b>5/28/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>6/9/2015</b>	<b>15.00</b>	<b>NP</b>	-	<b>19.97</b>
	<b>7/31/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>8/19/2015</b>	<b>15.77</b>	<b>NP</b>	-	<b>19.20</b>
	<b>9/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
<b>MW-38</b>	2/14/2000	4.72	NP	-	32.78
	(37.50)	6.17	NP	-	31.33
	8/23/2000	8.02	NP	-	29.48
	11/28/2000	8.41	NP	-	29.09
	2/21/2001	7.62	NP	-	29.88
	5/15/2001	7.65	7.65	sheen	29.85
	9/18/2001	9.52	NP	-	27.98
	12/19/2001	6.05	NP	-	31.45
	3/13/2002	4.97	NP	-	32.53
	6/24/2002	7.10	NP	-	30.40
	9/26/2002	9.09	NP	-	28.41
	12/23/2002	7.82	NP	-	29.68
	3/17/2003	4.89	NP	-	32.61
	6/26/2003	6.55	NP	-	30.95
	9/24/2003	9.04	NP	-	28.46
	12/30/2003	6.57	NP	-	30.93
	3/29/2004	5.42	NP	-	32.08
	6/29/2004	7.34	NP	-	30.16
	9/27/2004	8.57	NP	-	28.93
	12/14/2004	7.84	NP	-	29.66
	3/7/2005	7.85	NP	-	29.65
	6/20/2005	6.69	NP	-	30.81
	9/19/2005	8.73	NP	-	28.77
	12/12/2005	6.95	NP	-	30.55
	3/13/2006	4.92	NP	-	32.58
	6/27/2006	6.49	NP	-	31.01
	9/25/2006	8.64	NP	-	28.86
	12/11/2006	5.70	NP	-	31.80
	3/19/2007	4.66	NP	-	32.84
	6/18/2007	6.87	NP	-	30.63
	9/17/2007	9.52	NP	-	27.98
	12/17/2007	6.70	NP	-	30.80
	3/24/2008	5.09	NP	-	32.41
	6/23/2008	6.63	NP	-	30.87
	9/22/2008	8.68	NP	-	28.82
	1/5/2009	6.30	NP	-	31.20
	3/16/2009	6.49	NP	-	31.01
	6/15/2009	6.89	NP	-	30.61
	9/14/2009	8.57	NP	-	28.93
	12/21/2009	7.04	NP	-	30.46
	3/16/2010	5.09	NP	-	32.41
	6/21/2010	5.05	NP	-	32.45
	9/20/2010	7.43	NP	-	30.07
	12/14/2010	4.95	NP	-	32.55

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-38</b>	3/21/2011	4.11	NP	-	33.39
	6/8/2011	5.70	NP	-	31.80
	9/26/2011	7.73	NP	-	29.77
	12/12/2011	6.99	NP	-	30.51
	3/26/2012	9.22	NP	-	28.28
	6/26/2012	5.44	NP	-	32.06
	9/24/2012	7.86	NP	-	29.64
	12/17/2012	4.57	NP	-	32.93
	3/25/2013	5.88	NP	-	31.62
	6/17/2013	6.09	NP	-	31.41
	9/9/2013	7.70	NP	-	29.80
	12/4/2013	7.11	NP	-	30.39
	3/3/2014	6.11	NP	-	31.39
	6/13/2014	5.50	NP	-	32.00
	8/26/2014	7.17	NP	-	30.33
	12/8/2014	6.24	NP	-	31.26
	3/3/2015	4.64	NP	-	32.86
	<b>4/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>5/28/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>6/9/2015</b>	<b>6.21</b>	<b>NP</b>	-	<b>31.29</b>
	<b>7/31/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>8/19/2015</b>	<b>7.67</b>	<b>NP</b>	-	<b>29.83</b>
	<b>9/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
<b>MW-39</b>	2/14/2000	NM	NP	-	NA
(35.02)	5/22/2000	13.56	NP	-	21.46
	8/23/2000	14.15	NP	-	20.87
	11/28/2000	14.52	NP	-	20.50
	2/21/2001	14.30	NP	-	20.72
	5/15/2001	14.24	NP	-	20.78
	9/19/2001	14.82	NP	-	20.20
	12/19/2001	13.52	NP	-	21.50
	3/13/2002	13.26	NP	-	21.76
	6/24/2002	--Unable to Locate--			
	9/26/2002	17.01	NP	-	18.01
	12/20/2002	14.71	NP	-	20.31
	3/17/2003	13.37	NP	-	21.65
	6/26/2003	--Unable to Access--			
	9/24/2003	14.59	NP	-	20.43
	12/30/2003	13.97	NP	-	21.05
	3/29/2004	13.42	NP	-	21.60
	6/29/2004	14.17	NP	-	20.85
	9/27/2004	14.71	NP	-	20.31
	12/14/2004	--Unable to Access--			
	3/7/2005	--Unable to Access--			
	6/20/2005	--Unable to Access--			
	9/19/2005	14.54	NP	-	20.48
	12/12/2005	13.98	NP	-	21.04
	3/13/2006	12.96	NP	-	22.06
	6/27/2006	13.61	NP	-	21.41

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-39</b>	9/25/2006	14.44	NP	-	20.58
	12/11/2006	5.67	NP	-	29.35
	3/19/2007	12.96	NP	-	22.06
(35.18)	6/18/2007	13.73	NP	-	21.45
	9/17/2007	14.41	NP	-	20.77
	12/17/2007	13.61	NP	-	21.57
	1/22/2008	12.81	NP	-	22.37
	3/24/2008	13.00	NP	-	22.18
	6/23/2008	13.44	NP	-	21.74
	9/22/2008	14.22	NP	-	20.96
	1/5/2009	13.45	NP	-	21.73
	3/16/2009		--Unable to Access--		
	6/15/2009	13.49	NP	-	21.69
	9/14/2009	14.22	NP	-	20.96
	12/21/2009		--Unable to Access--		
	3/16/2010		--Unable to Access--		
	6/21/2010		--Unable to Access--		
	9/20/2010		--Unable to Access--		
	12/14/2010		--Unable to Access--		
	3/21/2011	12.08	NP	-	23.10
	6/8/2011		--Unable to Access--		
	9/26/2011	13.91	NP	-	21.27
	12/12/2011	NM	NP	-	NM
	3/26/2012	12.38	NP		22.80
	6/26/2012	12.80	NP	-	22.38
	9/24/2012	13.84	NP	-	21.34
	12/17/2012	12.57	NP	-	22.61
	3/25/2013	12.97	NP	-	22.21
	6/17/2013	13.02	NP	-	22.16
	9/9/2013	-	NP	-	NM
	12/4/2013		--Unable to Access--		
	3/3/2014		--Unable to Access--		
	6/13/2014		--Unable to Access--		
	8/26/2014		--Unable to Access--		
	<b>12/8/2014</b>		--Unable to Access--		
	<b>3/3/2015</b>		--Unable to Access--		
	<b>4/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>5/28/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>6/9/2015</b>	<b>10.89</b>	<b>NP</b>	-	<b>24.29</b>
	<b>7/31/2015</b>		--Unable to Access--		
	<b>8/19/2015</b>		--Unable to Access--		
	<b>9/29/2015</b>		--Unable to Access--		
<b>MW-40</b>	2/14/2000	13.64	NP	-	20.01
(33.65)	5/22/2000	14.28	NP	-	19.37
	8/23/2000	15.01	NP	-	18.64
	11/28/2000	15.15	NP	-	18.50
	2/21/2001	14.97	NP	-	18.68
	5/15/2001	15.00	NP	-	18.65
	9/19/2001	15.58	NP	-	18.07

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-40</b>	12/19/2001	13.72	NP	-	19.93
	3/13/2002	13.58	NP	-	20.07
	6/24/2002	14.62	NP	-	19.03
	9/26/2002	17.30	NP	-	16.35
	12/20/2002	15.78	NP	-	17.87
	3/17/2003	13.84	NP	-	19.81
	6/26/2003	14.45	NP	-	19.20
	9/24/2003	15.25	NP	-	18.40
	12/30/2003	14.03	NP	-	19.62
	3/29/2004	14.04	NP	-	19.61
	6/29/2004	14.85	NP	-	18.80
	9/27/2004	15.35	NP	-	18.30
	12/14/2004	14.80	NP	-	18.85
	3/7/2005	14.84	NP	-	18.81
	6/20/2005	14.50	NP	-	19.15
	9/19/2005	15.25	NP	-	18.40
	12/12/2005	14.40	NP	-	19.25
	3/13/2006	13.57	NP	-	20.08
	6/27/2006	14.39	NP	-	19.26
	9/25/2006	15.15	NP	-	18.50
	12/11/2006	14.04	NP	-	19.61
	3/19/2007	13.67	NP	-	19.98
(33.75)	6/18/2007	14.52	NP	-	19.23
	9/17/2007	15.19	NP	-	18.56
	12/17/2007	14.11	NP	-	19.64
	1/22/2008	13.45	NP	-	20.30
	3/24/2008	13.73	NP	-	20.02
	6/23/2008	14.21	NP	-	19.54
	9/22/2008	15.06	NP	-	18.69
	1/5/2009	13.25	NP	-	20.50
	3/16/2009	14.16	NP	-	19.59
	6/15/2009	14.34	NP	-	19.41
	9/14/2009	15.73	NP	-	18.02
	12/21/2009	14.16	NP	-	19.59
	3/16/2010	13.66	NP	-	20.09
	6/21/2010	13.56	NP	-	20.19
	9/20/2010	15.16	NP	-	18.59
	12/14/2010	--Unable to Access--			
	3/21/2011	12.86	NP	-	20.89
	6/8/2011	13.02	NP	-	20.73
	9/26/2011	14.69	NP	-	19.06
	12/12/2011	14.91	NP	-	18.84
	3/26/2012	13.09	NP	-	20.66
	6/26/2012	13.74	NP	-	20.01
	9/24/2012	14.61	NP	-	19.14
	12/17/2012	13.29	NP	-	20.46
	3/25/2013	13.98	NP	-	19.77
	6/17/2013	14.03	NP	-	19.72
	9/9/2013	14.62	NP	-	19.13

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-40</b>	12/4/2013	14.32	NP	-	19.43
	3/3/2014	13.74	NP	-	20.01
	6/13/2014	13.85	NP	-	19.90
	8/26/2014	14.45	NP	-	19.30
	12/8/2014	13.97	NP	-	19.78
	3/3/2015	13.64	NP	-	20.11
	<b>4/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>5/28/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>6/9/2015</b>	<b>14.21</b>	<b>NP</b>	-	<b>19.54</b>
	<b>7/31/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>8/19/2015</b>	<b>14.81</b>	<b>NP</b>	-	<b>18.94</b>
	<b>9/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
<b>MW-41B</b>	1/22/2008	15.78	NP	-	19.06
(34.84)	3/24/2008	15.84	NP	-	19.00
	6/23/2008	14.97	NP	-	19.87
	9/22/2008	17.90	NP	-	16.94
	1/5/2009	15.00	NP	-	19.84
	3/16/2009	16.48	NP	-	18.36
	6/15/2009	15.43	NP	-	19.41
	9/14/2009	17.86	NP	-	16.98
	12/21/2009	16.39	NP	-	18.45
	3/16/2010	16.17	NP	-	18.67
	6/21/2010	14.19	NP	-	20.65
	9/20/2010	17.34	NP	-	17.50
	12/14/2010	14.82	NP	-	20.02
	3/21/2011	13.73	NP	-	21.11
	6/8/2011	12.56	NP	-	22.28
	9/26/2011	17.45	NP	-	17.39
	12/12/2011	16.95	NP	-	17.89
	3/26/2012	13.82	NP	-	21.02
	6/26/2012	14.01	NP	-	20.83
	9/24/2012	17.37	NP	-	17.47
	12/17/2012	13.90	NP	-	20.94
	3/25/2013	16.39	NP	-	18.45
	6/17/2013	15.81	NP	-	19.03
	9/9/2013	16.82	NP	-	18.02
	12/4/2013	16.00	NP	-	18.84
	3/3/2014	15.70	NP	-	19.14
	6/13/2014	15.14	NP	-	19.70
	8/26/2014	16.44	NP	-	18.40
	12/8/2014	15.69	NP	-	19.15
	3/3/2015	15.76	NP	-	19.08
	<b>4/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>5/28/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>6/9/2015</b>	<b>16.45</b>	<b>NP</b>	-	<b>18.39</b>
	<b>7/31/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>8/19/2015</b>	<b>17.40</b>	<b>NP</b>	-	<b>17.44</b>
	<b>9/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-41C</b>	1/22/2008	15.34	NP	-	19.34
(34.68)	3/24/2008	15.40	NP	-	19.28
	6/23/2008	14.24	NP	-	20.44
	9/22/2008	17.50	NP	-	17.18
	1/5/2009	14.20	NP	-	20.48
	3/16/2009	15.93	NP	-	18.75
	6/15/2009	15.82	NP	-	18.86
	9/14/2009	17.45	NP	-	17.23
	12/21/2009	15.92	NP	-	18.76
	3/16/2010	15.75	NP	-	18.93
	6/21/2010	13.75	NP	-	20.93
	9/20/2010	17.03	NP	-	17.65
	12/14/2010	14.16	NP	-	20.52
	3/21/2011	13.23	NP	-	21.45
	6/8/2011	11.48	NP	-	23.20
	9/26/2011	17.02	NP	-	17.66
	12/12/2011	16.48	NP	-	18.20
	3/26/2012	13.23	NP	-	21.45
	6/26/2012	13.39	NP	-	21.29
	9/24/2012	16.91	NP	-	17.77
	12/17/2012	13.76	NP	-	20.92
	3/25/2013	15.91	NP	-	18.77
	6/17/2013	15.45	NP	-	19.23
	9/9/2013	16.70	NP	-	17.98
	12/4/2013	15.80	NP	-	18.88
	3/3/2014	14.84	NP	-	19.84
	6/13/2014	14.77	NP	-	19.91
	8/26/2014	16.38	NP	-	18.30
	12/8/2014	15.01	NP	-	19.67
	3/3/2015	15.45	NP	-	19.23
	4/29/2015	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	5/28/2015	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	6/9/2015	<b>16.04</b>	<b>NP</b>	-	<b>18.64</b>
	7/31/2015	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	8/19/2015	<b>16.97</b>	<b>NP</b>	-	<b>17.71</b>
	9/29/2015	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
<b>MW-42B</b>	1/22/2008	23.52	NP	-	15.73
(39.25)	3/24/2008	23.60	NP	-	15.65
	6/23/2008	19.68	NP	-	19.57
	9/22/2008	25.70	NP	-	13.55
	1/5/2009	21.68	NP	-	17.57
	3/16/2009	24.22	NP	-	15.03
	6/15/2009	23.38	NP	-	15.87
	9/14/2009	25.71	NP	-	13.54
	12/21/2009	24.09	NP	-	15.16
	3/16/2010	24.26	NP	-	14.99
	6/21/2010	21.77	NP	-	17.48
	9/20/2010	25.37	NP	-	13.88
	12/14/2010	22.21	NP	-	17.04

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-42B</b>	3/21/2011	21.27	NP	-	17.98
	6/8/2011	18.50	NP	-	20.75
	9/26/2011	25.22	NP	-	14.03
	12/12/2011	25.80	NP	-	13.45
	3/26/2012	19.97	NP	-	19.28
	6/26/2012	20.81	NP	-	18.44
	9/24/2012	25.26	NP	-	13.99
	12/17/2012	21.74	NP	-	17.51
	3/25/2013	24.36	NP	-	14.89
	6/17/2013	23.60	NP	-	15.65
	9/9/2013	25.21	NP	-	14.04
	12/4/2013	23.66	NP	-	15.59
	3/3/2014	22.89	NP	-	16.36
	6/13/2014	22.56	NP	-	16.69
	8/26/2014	24.72	NP	-	14.53
	12/8/2014	23.00	NP	-	16.25
	3/3/2015	23.61	NP	-	15.64
	<b>4/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>5/28/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>6/9/2015</b>	<b>24.21</b>	<b>NP</b>	-	<b>15.04</b>
	<b>7/31/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>8/19/2015</b>	<b>25.07</b>	<b>NP</b>	-	<b>14.18</b>
	<b>9/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
<b>MW-42C</b>	1/22/2008 (39.23)	24.83 24.71	NP NP	-	14.40 14.52
	6/23/2008	22.13	NP	-	17.10
	9/22/2008	27.16	NP	-	12.07
	1/5/2009	22.28	NP	-	16.95
	3/16/2009	25.05	NP	-	14.18
	6/15/2009	24.06	NP	-	15.17
	9/14/2009	27.03	NP	-	12.20
	12/21/2009	24.94	NP	-	14.29
	3/16/2010	25.15	NP	-	14.08
	6/21/2010	22.22	NP	-	17.01
	9/20/2010	26.63	NP	-	12.60
	12/14/2010	22.63	NP	-	16.60
	3/21/2011	21.66	NP	-	17.57
	6/8/2011	17.50	NP	-	21.73
	9/26/2011	26.27	NP	-	12.96
	12/12/2011	25.26	NP	-	13.97
	3/26/2011	21.24	NP	-	17.99
	6/26/2012	20.79	NP	-	18.44
	9/24/2012	26.51	NP	-	12.72
	12/17/2012	22.12	NP	-	17.11
	3/25/2013	25.25	NP	-	13.98
	6/17/2013	24.59	NP	-	14.64
	9/9/2013	26.26	NP	-	12.97
	12/4/2013	24.40	NP	-	14.83
	3/3/2014	23.37	NP	-	15.86

**TABLE 1B**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Kinder Morgan Liquid Terminals, LLC - Willbridge Terminal  
 Portland, Oregon

Well Designation	Date Gauged	Depth to Groundwater	Depth to SPH (feet)	SPH Thickness (feet)	Groundwater Elevation
<b>MW-42C</b>	6/13/2014	23.09	NP	-	16.14
	8/26/2014	25.53	NP	-	13.70
	12/8/2014	23.68	NP	-	15.55
	3/3/2015	24.54	NP	-	14.69
	<b>4/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>5/28/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>6/9/2015</b>	<b>25.15</b>	<b>NP</b>	-	<b>14.08</b>
	<b>7/31/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>
	<b>8/19/2015</b>	<b>26.04</b>	<b>NP</b>	-	<b>13.19</b>
	<b>9/29/2015</b>	<b>NM</b>	<b>NM</b>	-	<b>NM</b>

**NOTES:**

Surveyed elevations presented as they appeared in historic Delta monitoring reports and are assumed to be relative to the City of Portland datum

Data collected prior to 4Q11 are presented as they were reported by previous consultants

Sheen = Unmeasureable SPH less than 0.01 feet thick

SPH = Separate phase hydrocarbons

TOC = Top of casing original surveyed elevation and subsequent re-surveyed elevations

DTW = Depth to water

DTP = Depth to product (SPH)

NP = No measurable product

NA = Not applicable

NM = Not measured

- = No measurable product thickness

\* = SPH recovered for latest quarter monitored

\*\* = Unable to determine due to SPH viscosity

GWE = TOC -(DTW - (0.8 x DTP - DTW)), where 0.8 used as density of the SPH

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>B-1</b>	2/14/2000	16.82	NP	-	17.86
(34.68)	5/22/2000	17.05	NP	-	17.63
	8/22/2000	17.48	NP	-	17.20
	11/27/2000	17.82	NP	-	16.86
	2/20/2001	17.71	NP	-	16.97
	5/15/2001	17.68	NP	-	17.00
	9/18/2001	18.01	NP	-	16.67
	12/20/2001	17.10	NP	-	17.58
	3/13/2002	16.77	NP	-	17.91
	6/24/2002	17.32	NP	-	17.36
	9/26/2002	17.74	NP	-	16.94
	12/20/2002	17.57	NP	-	17.11
	3/17/2003	16.97	NP	-	17.71
	6/26/2003	17.24	NP	-	17.44
	9/24/2003	17.77	NP	-	16.91
	12/30/2003	17.09	NP	-	17.59
	3/29/2004	16.98	NP	-	17.70
	6/29/2004	17.45	NP	-	17.23
	9/27/2004	17.71	NP	-	16.97
	12/14/2004	17.58	NP	-	17.10
	3/7/2005	17.62	NP	-	17.06
	6/20/2005	17.30	NP	-	17.38
	9/19/2005	17.74	NP	-	16.94
	12/12/2005	17.22	NP	-	17.46
	3/13/2006	16.50	NP	-	18.18
	6/26/2006	17.03	NP	-	17.65
	9/25/2006	17.39	NP	-	17.29
	12/11/2006	16.96	NP	-	17.72
	3/19/2007	16.63	NP	-	18.05
(34.65)	6/18/2007	17.15	NP	-	17.50
	9/17/2007	17.63	NP	-	17.02
	12/17/2007	17.11	NP	-	17.54
	1/22/2008	16.61	NP	-	18.04
	3/24/2008	-	-	-	-
	4/16/2008	16.80	NP	-	17.85
	6/23/2008	17.03	NP	-	17.62
	9/22/2008	17.53	NP	-	17.12
	1/5/2009	16.61	NP	-	18.04
	3/16/2009	17.05	NP	-	17.60
	6/15/2009	17.13	NP	-	17.52
	9/14/2009	17.50	NP	-	17.15
	12/21/2009	16.96	NP	-	17.69
	3/16/2010	16.79	NP	-	17.86
	6/21/2010	16.49	NP	-	18.16
	9/20/2010	17.13	NP	-	17.52
	12/14/2010	16.27	NP	-	18.38
	3/21/2011	15.86	NP	-	18.79
	6/9/2011	15.28	NP	-	19.37

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>B-1</b>	9/26/2011	17.09	NP	-	17.56
	12/12/2011	16.88	NP	-	17.77
	3/26/2012	16.18	NP	-	18.47
	6/26/2012	16.52	NP	-	18.13
	9/24/2012	17.05	NP	-	17.60
	12/17/2012	16.30	NP	-	18.35
	3/25/2013	16.67	NP	-	17.98
	6/17/2013	16.76	NP	-	17.89
	9/9/2013	17.14	NP	-	17.51
	12/4/2013	17.20	NP	-	17.45
	3/3/2014	16.74	NP	-	17.91
	6/18/2014	16.65	NP	-	18.00
	8/26/2014	16.97	NP	-	17.68
	12/8/2014	16.70	NP	-	17.95
	3/3/2015	16.52	NP	-	18.13
	<b>6/9/2015</b>	<b>16.92</b>	<b>NP</b>	-	<b>17.73</b>
	<b>8/19/2015</b>	<b>17.21</b>	<b>NP</b>	-	<b>17.44</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>B-2</b>	2/14/2000	16.68	NP	-	18.67
(35.35)	5/22/2000	17.06	NP	-	18.29
	8/22/2000	17.61	NP	-	17.74
	11/27/2000	17.97	NP	-	17.38
	2/20/2001	17.82	NP	-	17.53
	5/15/2001	17.74	NP	-	17.61
	9/18/2001	18.23	NP	-	17.12
	12/20/2001	17.06	NP	-	18.29
	3/13/2002	16.80	NP	-	18.55
	6/24/2002	17.44	NP	-	17.91
	9/26/2002	17.99	NP	-	17.36
	12/20/2002	18.06	NP	-	17.29
	3/17/2003	17.03	NP	-	18.32
	6/26/2003	17.29	NP	-	18.06
	9/24/2003	18.03	NP	-	17.32
	12/30/2003	17.38	NP	-	17.97
	3/29/2004	16.89	NP	-	18.46
	6/29/2004	17.62	NP	-	17.73
	9/27/2004	18.09	NP	-	17.26
	12/14/2004	17.94	NP	-	17.41
	3/7/2005	17.78	NP	-	17.57
	6/20/2005	17.41	NP	-	17.94
	9/19/2005	17.98	NP	-	17.37
	12/12/2005	17.37	NP	-	17.98
	3/13/2006	16.50	NP	-	18.85
	6/26/2006	17.14	NP	-	18.21
	9/25/2006	17.63	NP	-	17.72
	12/11/2006	16.90	NP	-	18.45
	3/19/2007	16.47	NP	-	18.88
(35.54)	6/18/2007	17.18	NP	-	18.36
	9/17/2007	17.77	NP	-	17.77
	12/17/2007	17.01	NP	-	18.53
	1/22/2008	16.40	NP	-	19.14
	3/24/2008	-	-	-	-
	4/16/2008	16.69	NP	-	18.85
	6/23/2008	17.04	NP	-	18.50
	9/22/2008	17.60	NP	-	17.94
	1/5/2009	16.58	NP	-	18.96
	3/16/2009	17.09	NP	-	18.45
	6/15/2009	17.09	NP	-	18.45
	9/14/2009	17.56	NP	-	17.98
	12/21/2009	17.02	NP	-	18.52
	3/16/2010	16.78	NP	-	18.76
	6/21/2010	16.45	NP	-	19.09
	9/20/2010	17.23	NP	-	18.31
	12/14/2010	16.24	NP	-	19.30
	3/21/2011	14.82	NP	-	20.72
	6/9/2011	15.81	NP	-	19.73
	9/26/2011	17.20	NP	-	18.34

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>B-2</b>	12/12/2011	16.90	NP	-	18.64
	3/26/2012	16.06	NP	-	19.48
	6/26/2012	16.46	NP	-	19.08
	9/24/2012	17.12	NP	-	18.42
	12/17/2012	16.36	NP	-	19.18
	3/25/2013	16.61	NP	-	18.93
	6/17/2013	16.69	NP	-	18.85
	9/9/2013	17.14	NP	-	18.40
	12/4/2013	17.18	NP	-	18.36
	3/3/2014	16.57	NP	-	18.97
	6/18/2014	16.58	NP	-	18.96
	8/26/2014	17.02	NP	-	18.52
	12/8/2014	16.68	NP	-	18.86
	3/3/2015	16.48	NP	-	19.06
	<b>6/9/2015</b>	<b>16.97</b>	<b>NP</b>	-	<b>18.57</b>
	<b>8/19/2015</b>	<b>17.28</b>	<b>NP</b>	-	<b>18.26</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>B-3</b>	2/14/2000	18.14	NP	-	16.67
(34.81)	5/22/2000	18.36	NP	-	16.45
	8/22/2000	19.05	NP	-	15.76
	11/27/2000	19.31	NP	-	15.50
	2/20/2001	19.22	NP	-	15.59
	5/15/2001	19.26	NP	-	15.55
	9/18/2001	19.63	NP	-	15.18
	12/20/2001	18.03	NP	-	16.78
	3/13/2002	18.12	NP	-	16.69
	6/24/2002	18.84	NP	-	15.97
	9/26/2002	19.21	NP	-	15.60
	12/20/2002	18.79	NP	-	16.02
	3/17/2003	18.14	NP	-	16.67
	6/26/2003	18.87	NP	-	15.94
	9/24/2003	19.20	NP	-	15.61
	12/30/2003	18.22	NP	-	16.59
	3/29/2004	18.30	NP	-	16.51
	6/29/2004	18.93	NP	-	15.88
	9/27/2004	19.19	NP	-	15.62
	12/14/2004	18.89	NP	-	15.92
	3/7/2005	19.14	NP	-	15.67
	6/20/2005	18.88	NP	-	15.93
	9/19/2005	19.24	NP	-	15.57
	12/12/2005	18.50	NP	-	16.31
	3/13/2006	17.75	NP	-	17.06
	6/26/2006	18.43	NP	-	16.38
	9/25/2006	18.87	NP	-	15.94
	12/11/2006	18.04	NP	-	16.77
	3/19/2007	18.02	NP	-	16.79
(34.80)	6/18/2007	18.76	NP	-	16.04
	9/17/2007	19.18	NP	-	15.62
	12/17/2007	18.36	NP	-	16.44
	1/22/2008	17.97	NP	-	16.83
	3/24/2008	-	-	-	-
	4/16/2008	18.34	NP	-	16.46
	6/23/2008	18.45	NP	-	16.35
	9/22/2008	19.70	NP	-	15.10
	1/5/2009	17.33	NP	-	17.47
	3/16/2009	18.51	NP	-	16.29
	6/15/2009	18.70	NP	-	16.10
	9/14/2009	18.94	NP	-	15.86
	12/21/2009	17.96	NP	-	16.84
	3/16/2010	17.90	NP	-	16.90
	6/21/2010	17.28	NP	-	17.52
	9/20/2010	17.92	NP	-	16.88
	12/14/2010	16.83	NP	-	17.97
	3/21/2011	16.54	NP	-	18.26
	6/9/2011	15.46	NP	-	19.34
	9/26/2011	17.95	NP	-	16.85

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>B-3</b>	12/12/2011	17.60	NP	-	17.20
	3/26/2012	17.11	NP	-	17.69
	6/26/2012	17.53	17.52	0.01	17.28
	9/24/2012	18.34	NP	-	16.46
	12/17/2012	17.06	NP	-	17.74
	3/25/2013	15.00	NP	-	19.80
	6/17/2013	18.20	NP	-	16.60
	9/9/2013	18.83	NP	-	15.97
	12/4/2013	18.83	NP	-	15.97
	3/3/2014	18.14	NP	-	16.66
	9/18/2014	17.94	NP	-	16.86
	8/26/2014	18.28	NP	-	16.52
	12/8/2014	18.03	NP	-	16.77
	3/3/2015	17.53	NP	-	17.27
	<b>6/9/2015</b>	<b>18.16</b>	<b>NP</b>	-	<b>16.64</b>
	<b>8/19/2015</b>	<b>18.55</b>	<b>NP</b>	-	<b>16.25</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>B-4</b>	2/14/2000	18.25	17.59	0.66	16.98
(34.70)	5/22/2000	17.80	NP	-	16.90
	8/22/2000	18.22	18.21	0.01	16.49
	11/27/2000	18.55	NP	-	16.15
	2/20/2001	18.49	18.48	0.01	16.22
	5/15/2001	18.47	18.46	0.01	16.24
	9/18/2001	18.75	18.74	0.01	15.96
	12/20/2001	18.05	NP	-	16.65
	3/13/2002	17.69	NP	-	17.01
	6/24/2002	18.10	NP	-	16.60
	9/26/2002	18.43	NP	-	16.27
	12/20/2002	18.43	NP	-	16.27
	3/17/2003	18.14	17.81	0.33	16.82
	6/26/2003	18.08	18.05	0.03	16.64
	9/24/2003	18.45	18.44	0.01	16.26
	12/30/2003	18.05	NP	-	16.65
	3/29/2004	17.90	17.70	0.20	16.96
	6/29/2004	18.61	18.61	sheen	16.09
	9/27/2004	18.46	NP	-	16.24
	12/14/2004	18.42	NP	-	16.28
	3/7/2005	18.35	NP	-	16.35
	6/20/2005	18.19	18.11	0.08	16.57
	9/19/2005	18.45	18.45	sheen	16.25
	12/12/2005	18.17	NP	-	16.53
	3/13/2006	17.43	17.24	0.19	17.42
	6/26/2006	17.79	NP	-	16.91
	9/25/2006	18.28	NP	-	16.42
	12/11/2006	**	17.87	-	NM
	3/19/2007	17.51	NP	-	17.19
(34.69)	6/18/2007	18.00	NP	-	16.69
	9/17/2007	18.38	18.38	sheen	16.31
	12/17/2007	17.98	NP	-	16.71
	1/22/2008	17.53	NP	-	17.16
	3/24/2008	17.61	NP	-	17.08
	6/23/2008	17.84	NP	-	16.85
	9/22/2008	19.30	NP	-	15.39
	1/5/2009	17.58	NP	-	17.11
	3/16/2009	17.99	17.97	0.02	16.72
	6/15/2009	17.96	17.95	0.01	16.74
	9/14/2009	18.29	18.23	0.06	16.45
	12/21/2009	17.91	17.90	0.01	16.79
	3/16/2010	17.68	17.66	0.02	17.03
	6/21/2010	17.35	17.34	0.01	17.35
	9/20/2010	17.88	17.87	0.01	16.82
	12/14/2010	17.29	17.28	0.01	17.41
	3/21/2011	16.71	NP	-	17.98
	6/9/2011	16.63	16.61	0.02	18.08
	9/26/2011	17.79	17.78	0.01	16.91
	12/12/2011	17.63	17.6	0.03	17.08

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>B-4</b>	3/26/2012	17.05	17.02	0.03	17.66
	6/26/2012	17.23	17.22	0.01	17.47
	9/24/2012	17.87	NP	-	16.82
	12/17/2012	17.21	17.2	0.01	17.49
	3/25/2013	17.48	17.47	0.01	17.22
	6/17/2013	17.64	17.63	0.01	17.06
	9/9/2013	18.02	18.01	0.01	16.68
	12/4/2013	18.12	NP	-	16.57
	3/3/2014	17.73	17.72	0.01	16.97
	6/18/2014	17.42	NP	-	17.27
	8/26/2014	17.75	NP	-	16.94
	12/8/2014	17.65	NP	-	17.04
	3/3/2015	17.25	NP	-	17.44
	<b>6/9/2015</b>	<b>17.65</b>	<b>NP</b>	<b>-</b>	<b>17.04</b>
	<b>8/19/2015</b>	<b>17.97</b>	<b>NP</b>	<b>-</b>	<b>16.72</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>B-5</b>	2/14/2000	16.24	NP	-	18.59
(34.83)	5/22/2000	16.63	NP	-	18.20
	8/22/2000	16.98	sheen	-	17.85
	11/27/2000	17.36	NP	-	17.47
	2/20/2001	17.23	NP	-	17.60
	5/15/2001	17.18	NP	-	17.65
	9/18/2001	17.49	NP	-	17.34
	12/20/2001	16.68	NP	-	18.15
	3/13/2002	16.28	NP	-	18.55
	6/24/2002	16.88	NP	-	17.95
	9/26/2002	17.28	NP	-	17.55
	12/20/2002	17.43	NP	-	17.40
	3/17/2003	16.51	NP	-	18.32
	6/26/2003	16.71	NP	-	18.12
	9/24/2003	17.33	NP	-	17.50
	12/30/2003	16.86	NP	-	17.97
	3/29/2004	16.33	NP	-	18.50
	6/29/2004	16.99	NP	-	17.84
	9/27/2004	17.35	NP	-	17.48
	12/14/2004	17.25	NP	-	17.58
	3/7/2005	17.15	NP	-	17.68
	6/20/2005	16.77	NP	-	18.06
	9/19/2005	17.25	NP	-	17.58
	12/12/2005	16.75	NP	-	18.08
	3/13/2006	15.90	NP	-	18.93
	6/26/2006	16.58	NP	-	18.25
	9/25/2006	17.10	NP	-	17.73
	12/11/2006	16.50	NP	-	18.33
	3/19/2007	15.90	NP	-	18.93
(34.83)	6/18/2007	16.66	NP	-	18.17
	9/17/2007	17.23	NP	-	17.60
	12/17/2007	16.71	16.68	0.03	18.14
	1/22/2008	15.97	NP	-	18.86
	3/24/2008	-	-	-	-
	4/16/2008	16.20	NP	-	18.63
	6/23/2008	16.58	NP	-	18.25
	9/22/2008	17.10	NP	-	17.73
	1/5/2009	16.85	NP	-	17.98
	3/16/2009	16.63	NP	-	18.20
	6/15/2009	16.60	NP	-	18.23
	9/14/2009	17.08	NP	-	17.75
	12/21/2009	16.75	NP	-	18.08
	3/16/2010	16.29	NP	-	18.54
	6/21/2010	16.10	NP	-	18.73
	9/20/2010	16.81	NP	-	18.02
	12/14/2010	16.04	NP	-	18.79
	3/21/2011	15.35	NP	-	19.48
	6/9/2011	15.58	NP	-	19.25
	9/26/2011	16.66	NP	-	18.17

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>B-5</b>	12/12/2011	16.42	NP	-	18.41
	3/26/2012	19.80	NP	-	15.03
	6/26/2012	14.92	NP	-	19.91
	9/24/2012	14.93	NP	-	19.90
	12/17/2012	15.89	NP	-	18.94
	3/25/2013	16.05	NP	-	18.78
	6/17/2013	16.15	NP	-	18.68
	9/9/2013	16.62	NP	-	18.21
	12/4/2013	16.68	NP	-	18.15
	3/3/2014	16.17	NP	-	18.66
	6/18/2014	16.00	NP	-	18.83
	8/26/2014	16.45	NP	-	18.38
	12/8/2014	16.18	NP	-	18.65
	3/3/2015	15.90	NP	-	18.93
	<b>6/9/2015</b>	<b>16.32</b>	<b>NP</b>	-	<b>18.51</b>
	<b>8/19/2015</b>	<b>16.77</b>	<b>NP</b>	-	<b>18.06</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>B-6</b>	2/14/2000	16.53	NP	-	18.96
(35.49)	5/22/2000	16.95	NP	-	18.54
	8/22/2000	17.40	NP	-	18.09
	11/27/2000	17.80	NP	-	17.69
	2/20/2001	17.64	NP	-	17.85
	5/15/2001	17.56	NP	-	17.93
	9/18/2001	17.95	NP	-	17.54
	12/20/2001	17.02	NP	-	18.47
	3/13/2002	16.57	NP	-	18.92
	6/24/2002	17.22	NP	-	18.27
	9/26/2002	17.71	NP	-	17.78
	12/20/2002	17.80	NP	-	17.69
	3/17/2003	16.81	NP	-	18.68
	6/26/2003	17.04	NP	-	18.45
	9/24/2003	17.73	NP	-	17.76
	12/30/2003	17.21	NP	-	18.28
	3/29/2004	16.61	NP	-	18.88
	6/29/2004	17.35	NP	-	18.14
	9/27/2004	17.80	NP	-	17.69
	12/14/2004	17.66	NP	-	17.83
	3/7/2005	17.50	NP	-	17.99
	6/20/2005	17.12	NP	-	18.37
	9/19/2005	17.66	NP	-	17.83
	12/12/2005	17.12	NP	-	18.37
	3/13/2006	16.14	NP	-	19.35
	6/26/2006	16.90	NP	-	18.59
	9/25/2006	17.50	NP	-	17.99
	12/11/2006	16.82	NP	-	18.67
	3/19/2007	16.23	NP	-	19.26
(35.46)	6/18/2007	17.01	NP	-	18.45
	9/17/2007	17.63	NP	-	17.83
	12/17/2007	16.68	NP	-	18.78
	1/22/2008	16.22	NP	-	19.24
	3/24/2008	-	-	-	-
	4/16/2008	16.49	NP	-	18.97
	6/23/2008	16.80	NP	-	18.66
	9/22/2008	17.51	NP	-	17.95
	1/5/2009	16.72	NP	-	18.74
	3/16/2009	16.95	NP	-	18.51
	6/15/2009	19.63	NP	-	15.83
	9/14/2009	17.57	NP	-	17.89
	12/21/2009	17.09	NP	-	18.37
	3/16/2010	16.57	NP	-	18.89
	6/21/2010	16.36	NP	-	19.10
	9/20/2010	17.13	NP	-	18.33
	12/14/2010	16.27	NP	-	19.19
	3/21/2011	15.59	NP	-	19.87
	6/9/2011	15.82	NP	-	19.64
	9/26/2011	17.02	NP	-	18.44

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>B-6</b>	12/12/2011	16.81	NP	-	18.65
	3/26/2012	15.86	NP	-	19.60
	6/26/2012	16.10	NP	-	19.36
	9/24/2012			Inaccessible	
	12/17/2012	16.20	NP	-	19.26
	3/25/2013	16.37	NP	-	19.09
	6/17/2013	16.50	NP	-	18.96
	9/9/2013	17.02	NP	-	18.44
	12/4/2013	17.06	NP	-	18.40
	3/3/2014	16.51	NP	-	18.95
	6/18/2014	17.06	NP	-	18.40
	8/26/2014	16.89	NP	-	18.57
	12/8/2014	16.58	NP	-	18.88
	3/3/2015	16.23	NP	-	19.23
	<b>6/9/2015</b>	<b>16.69</b>	<b>NP</b>	-	<b>18.77</b>
	<b>8/19/2015</b>	<b>17.18</b>	<b>NP</b>	-	<b>18.28</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>B-16</b>	2/14/2000	16.84	NP	-	18.98
(35.82)	5/22/2000	17.27	NP	-	18.55
	8/22/2000	17.76	NP	-	18.06
	11/27/2000	18.16	NP	-	17.66
	2/20/2001	17.98	NP	-	17.84
	5/15/2001	18.04	NP	-	17.78
	9/18/2001	18.44	NP	-	17.38
	12/20/2001	17.43	NP	-	18.39
	3/13/2002	17.02	NP	-	18.80
	6/24/2002	17.67	NP	-	18.15
	9/26/2002	18.18	NP	-	17.64
	12/20/2002	18.31	NP	-	17.51
	3/17/2003	17.24	NP	-	18.58
	6/26/2003	17.46	NP	-	18.36
	9/24/2003	18.21	NP	-	17.61
	12/30/2003	17.67	NP	-	18.15
	3/29/2004	17.06	NP	-	18.76
	6/29/2004	17.80	NP	-	18.02
	9/27/2004	18.28	NP	-	17.54
	12/14/2004	18.14	NP	-	17.68
	3/7/2005	17.95	NP	-	17.87
	6/20/2005	17.58	NP	-	18.24
	9/19/2005	18.16	NP	-	17.66
	12/12/2005	17.58	NP	-	18.24
	3/13/2006	16.59	NP	-	19.23
	6/26/2006	17.33	NP	-	18.49
	9/25/2006	17.94	NP	-	17.88
	12/11/2006	17.18	NP	-	18.64
	3/19/2007	16.65	NP	-	19.17
(35.93)	6/18/2007	17.38	NP	-	18.55
	9/17/2007	18.08	NP	-	17.85
	12/17/2007	17.20	NP	-	18.73
	1/22/2008	16.65	NP	-	19.28
	3/24/2008	-	-	-	-
	4/16/2008	16.90	NP	-	19.03
	6/23/2008	17.33	NP	-	18.60
	9/22/2008	17.92	NP	-	18.01
	1/5/2009	17.14	NP	-	18.79
	3/16/2009	17.35	NP	-	18.58
	6/15/2009	17.38	NP	-	18.55
	9/14/2009	17.91	NP	-	18.02
	12/21/2009	17.49	NP	-	18.44
	3/16/2010	16.98	NP	-	18.95
	6/21/2010	16.76	NP	-	19.17
	9/20/2010	17.60	NP	-	18.33
	12/14/2010	16.70	NP	-	19.23
	3/21/2011	16.00	NP	-	19.93
	6/9/2011	16.21	NP	-	19.72
	9/26/2011	17.56	NP	-	18.37

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>B-16</b>	12/12/2011	17.23	NP	-	18.70
	3/26/2012	16.32	NP	-	19.61
	6/26/2012	16.61	NP	-	19.32
	9/24/2012	17.40	NP	-	18.53
	12/17/2012	16.69	NP	-	19.24
	3/25/2013	16.83	NP	-	19.10
	6/17/2013	16.95	NP	-	18.98
	9/9/2013	17.46	NP	-	18.47
	12/4/2013	17.52	NP	-	18.41
	3/3/2014	16.93	NP	-	19.00
	6/18/2014	16.78	NP	-	19.15
	8/26/2014	17.32	NP	-	18.61
	12/8/2014	17.05	NP	-	18.88
	3/3/2015	16.68	NP	-	19.25
	<b>6/9/2015</b>	<b>17.16</b>	<b>NP</b>	-	<b>18.77</b>
	<b>8/19/2015</b>	<b>17.61</b>	<b>NP</b>	-	<b>18.32</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>B-17</b>	2/14/2000	16.83	NP	-	18.78
(35.61)	5/22/2000	17.20	NP	-	18.41
	8/22/2000	17.76	NP	-	17.85
	11/27/2000	18.05	NP	-	17.56
	2/20/2001	17.88	NP	-	17.73
	5/15/2001	17.84	NP	-	17.77
	9/18/2001	18.21	NP	-	17.40
	12/20/2001	17.31	NP	-	18.30
	3/13/2002	16.91	NP	-	18.70
	6/24/2002	17.50	NP	-	18.11
	9/26/2002	17.97	NP	-	17.64
	12/20/2002	18.07	NP	-	17.54
	3/17/2003	17.13	NP	-	18.48
	6/26/2003	17.33	NP	-	18.28
	9/24/2003	18.00	NP	-	17.61
	12/30/2003	17.48	NP	-	18.13
	3/29/2004	16.39	NP	-	19.22
	6/29/2004	17.62	NP	-	17.99
	9/27/2004	18.03	NP	-	17.58
	12/14/2004	17.95	NP	-	17.66
	3/7/2005	17.81	NP	-	17.80
	6/20/2005	17.40	NP	-	18.21
	9/19/2005	17.93	NP	-	17.68
	12/12/2005	17.42	NP	-	18.19
	3/13/2006	16.50	NP	-	19.11
	6/26/2006	17.17	NP	-	18.44
	9/25/2006	17.74	NP	-	17.87
	12/11/2006	17.08	NP	-	18.53
	3/19/2007	16.56	NP	-	19.05
(35.61)	6/18/2007	17.30	NP	-	18.31
	9/17/2007	17.86	NP	-	17.75
	12/17/2007	17.24	NP	-	18.37
	1/22/2008	16.57	NP	-	19.04
	3/24/2008	-	-	-	-
	4/16/2008	16.80	NP	-	18.81
	6/23/2008	17.14	NP	-	18.47
	9/22/2008	17.73	NP	-	17.88
	1/5/2009	17.00	NP	-	18.61
	3/16/2009	17.20	NP	-	18.41
	6/15/2009			----Inaccessible----	
	9/14/2009	17.71	NP	-	17.90
	12/21/2009	NM	NM	NM	NM
	3/16/2010	16.86	NP	-	18.75
	6/21/2010	16.64	NP	-	18.97
	9/20/2010	17.40	NP	-	18.21
	12/14/2010	16.60	NP	-	19.01
	3/21/2011	15.92	NP	-	19.69
	6/9/2011	16.10	NP	-	19.51
	9/26/2011	17.29	NP	-	18.32

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>B-17</b>	12/12/2011	17.02	NP	-	18.59
	3/26/2012	16.20	NP	-	19.41
	6/26/2012	16.43	NP	-	19.18
	9/24/2012	17.20	NP	-	18.41
	12/17/2012	16.53	NP	-	19.08
	3/25/2013	16.67	NP	-	18.94
	6/17/2013	16.79	NP	-	18.82
	9/9/2013	17.26	NP	-	18.35
	12/4/2013	17.34	NP	-	18.27
	3/3/2014	16.79	NP	-	18.82
	6/18/2014	16.63	NP	-	18.98
	8/26/2014	17.11	NP	-	18.50
	12/8/2014	16.87	NP	-	18.74
	3/3/2015	16.53	NP	-	19.08
	<b>6/9/2015</b>	<b>16.96</b>	<b>NP</b>	-	<b>18.65</b>
	<b>8/19/2015</b>	<b>17.40</b>	<b>NP</b>	-	<b>18.21</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>B-18</b>	2/14/2000	18.55	NP	-	16.94
(35.49)	5/22/2000	18.66	NP	-	16.83
	8/22/2000	19.11	NP	-	16.38
	11/27/2000	19.43	NP	-	16.06
	2/20/2001	19.44	NP	-	16.05
	5/15/2001	19.43	NP	-	16.06
	9/18/2001	19.68	NP	-	15.81
	12/20/2001			-----Unable to Locate-----	
	3/13/2002			----Inaccessible - Covered with Sand----	
	6/24/2002			----Inaccessible - Covered with Sand----	
	9/26/2002			---TOC broken, bentonite blocking well---	
(36.00)	12/20/2002	3.88	NP	-	32.12
	3/17/2003			Unable to access	
	6/26/2003			Well blocked ~5 feet bgs	
	9/24/2003			Well blocked ~5 feet bgs	
	12/30/2003			Well blocked ~5 feet bgs	
	3/29/2004			Well blocked ~5 feet bgs	
	6/29/2004			Abandoned	
<b>B-22</b>	2/14/2000	17.91	NP	-	17.92
(35.83)	5/22/2000	18.00	NP	-	17.83
	8/22/2000	18.66	18.65	0.01	17.18
	11/27/2000	19.02	sheen	-	16.81
	2/20/2001	19.02	18.99	0.03	16.83
	5/15/2001	19.01	19.00	0.01	16.83
	9/18/2001			----- Well Has Been Buried -----	
	12/20/2001			----Well Damaged During Construction Activities----	
	3/13/2002			----Well Damaged During Construction Activities----	
	6/24/2002			----Well Damaged During Construction Activities----	
	9/26/2002			----Well Damaged During Construction Activities----	
				----- Well Abandoned December 10, 2002 -----	

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>B-22A</b>	12/20/2002	19.10	NP	-	15.77
(34.87)	3/17/2003	18.33	18.30	0.03	16.54
	6/26/2003	18.72	18.69	0.03	16.15
	9/24/2003	19.08	19.05	0.03	15.79
	12/30/2003	18.52	NP	-	16.35
	3/29/2004	18.25	18.25	sheen	16.62
	6/29/2004	18.78	NP	-	16.09
	9/27/2004	19.07	NP	-	15.80
	12/14/2004	18.95	NP	-	15.92
	3/7/2005	19.08	NP	-	15.79
	6/20/2005	18.75	NP	-	16.12
	9/19/2005	19.07	NP	-	15.80
	12/12/2005	18.55	NP	-	16.32
	3/13/2006	17.66	NP	-	17.21
	6/26/2006	18.12	NP	-	16.75
	9/25/2006	18.43	NP	-	16.44
	12/11/2006	18.49	NP	-	16.38
	3/19/2007	17.97	NP	-	16.90
(34.85)	6/18/2007	18.59	NP	-	16.26
	9/17/2007	19.02	NP	-	15.83
	12/17/2007	18.58	NP	-	16.27
	3/24/2008	18.16	NP	-	16.69
	6/23/2008	18.33	NP	-	16.52
	9/22/2008	18.80	NP	-	16.05
	1/5/2009	15.76	NP	-	19.09
	3/16/2009	18.36	NP	-	16.49
	6/15/2009	18.53	NP	-	16.32
	9/14/2009	18.52	NP	-	16.33
	12/21/2009	18.07	NP	-	16.78
	3/16/2010	17.76	NP	-	17.09
	6/21/2010	17.17	NP	-	17.68
	9/20/2010	17.75	NP	-	17.10
	12/14/2010	17.06	NP	-	17.79
(34.87)	3/21/2011	16.54	NP	-	18.31
	6/9/2011	15.85	NP	-	19.00
	9/26/2011	17.71	NP	-	17.14
	12/12/2011	17.49	NP	-	17.36
	3/26/2012	17.07	NP	-	17.78
	6/26/2012	17.35	NP	-	17.50
	9/24/2012	18.05	NP	-	16.80
	12/17/2012	17.05	NP	-	17.80

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>B-22A</b>	3/25/2013	17.80	NP	-	17.05
	6/17/2013	18.01	NP	-	16.84
	9/9/2013	18.61	NP	-	16.24
	12/4/2013	18.43	NP	-	16.42
	3/3/2014	18.24	NP	-	16.61
	6/18/2014	17.69	NP	-	17.16
	8/26/2014	17.98	NP	-	16.87
	12/8/2014	17.93	NP	-	16.92
	3/3/2015	17.30	NP	-	17.55
	<b>6/9/2015</b>	<b>17.84</b>	<b>NP</b>	-	<b>17.01</b>
	<b>8/19/2015</b>	<b>18.24</b>	<b>NP</b>	-	<b>16.61</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>B-25</b>	2/14/2000	18.39	NP	-	17.39
(35.78)	5/22/2000	17.67	NP	-	18.11
	8/22/2000	19.09	NP	-	16.69
	11/27/2000	19.51	NP	-	16.27
	2/20/2001	18.79	NP	-	16.99
	5/15/2001	19.54	NP	-	16.24
	9/18/2001	19.86	NP	-	15.92
	12/20/2001		----Could Not Access----		
	3/13/2002	18.52	NP	-	17.26
	6/24/2002	18.89	NP	-	16.89
	9/26/2002	19.33	NP	-	16.45
	12/20/2002	19.43	NP	-	16.35
	3/17/2003	18.65	NP	-	17.13
	6/26/2003	18.82	NP	-	16.96
	9/24/2003	19.24	NP	-	16.54
	12/30/2003	18.95	NP	-	16.83
	3/29/2004	18.42	NP	-	17.36
	6/29/2004		----Could Not Access----		
	9/27/2004	19.25	NP	-	16.53
	12/14/2004	19.21	NP	-	16.57
	3/7/2005	21.57	NP	-	14.21
	6/20/2005	18.89	NP	-	16.89
	9/19/2005	19.26	NP	-	16.52
	12/12/2005	18.89	NP	-	16.89
	3/13/2006	-	-	-	-
	6/26/2006	18.27	NP	-	17.51
	9/25/2006	18.75	NP	-	17.03
	12/11/2006	18.68	NP	-	17.10
	3/19/2007	18.00	NP	-	17.78
(35.76)	6/18/2007	18.55	NP	-	17.21
	9/17/2007	19.10	NP	-	16.66
	12/17/2007	18.79	NP	-	16.97
	3/24/2008		----Could Not Access----		
	6/23/2008	18.38	NP	-	17.38
	9/22/2008	18.95	NP	-	16.81
	1/5/2009	18.17	NP	-	17.59
	3/16/2009	NM	NM	NM	NM
	6/15/2009		----Could Not Locate----		
	9/14/2009		----Could Not Locate----		
	12/21/2009	NM	NM	NM	NM
	3/16/2010		----Could Not Locate----		
	6/21/2010		----Damaged----		
	9/20/2010	NM	NM	NM	NM
	12/14/2010	NM	NM	NM	NM
	3/21/2011	NM	NM	NM	NM
	6/9/2011	NM	NM	NM	NM
	9/26/2011	NM	NM	NM	NM
	12/12/2011	NM	NM	NM	NM
	3/26/2012	NM	NM	NM	NM

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>B-25</b>	6/26/2012	NM	NM	NM	NM
(35.78)	9/24/2012	NM	NM	NM	NM
	12/17/2012	NM	NM	NM	NM
	3/25/2013	NM	NM	NM	NM
	6/17/2013	NM	NM	NM	NM
	9/9/2013	NM	NM	NM	NM
	12/4/2013	NM	NM	NM	NM
	3/3/2014	NM	NM	NM	NM
	6/18/2014	NM	NM	NM	NM
	8/26/2014	NM	NM	NM	NM
	12/8/2014	NM	NM	NM	NM
	3/3/2015	NM	NM	NM	NM
	<b>6/9/2015</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>
	<b>8/19/2015</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>B-27</b>	2/14/2000	17.61	NP	-	18.13
(35.74)	5/22/2000	17.76	NP	-	17.98
	8/22/2000	18.27	NP	-	17.47
	11/27/2000	18.71	NP	-	17.03
	2/20/2001	18.66	18.65	0.01	17.09
	5/15/2001	18.74	18.66	0.08	17.06
	9/18/2001	18.99	NP	-	16.75
	12/20/2001	18.66	NP	-	17.08
	3/13/2002	17.76	NP	-	17.98
	6/24/2002	18.09	NP	-	17.65
	9/26/2002	18.50	NP	-	17.24
	12/20/2002	18.65	18.68	0.03	17.11
	3/17/2003	17.91	17.90	0.01	17.84
	6/26/2003	17.96	NP	-	17.78
	9/24/2003	18.51	NP	-	17.23
	12/30/2003	18.21	NP	-	17.53
	3/29/2004	17.72	17.31	0.41	18.35
	6/29/2004	18.03	NP	-	17.71
	9/27/2004	18.53	NP	-	17.21
	12/14/2004	18.50	NP	-	17.24
	3/7/2005	18.34	NP	-	17.40
	6/20/2005	18.03	NP	-	17.71
	9/19/2005	18.48	NP	-	17.26
	12/12/2005	18.13	NP	-	17.61
	3/13/2006	17.20	16.70	0.50	18.94
	6/26/2006	17.44	NP	-	18.30
	9/25/2006	18.22	NP	-	17.52
	12/11/2006	17.84	17.81	0.03	17.92
	3/19/2007	17.14	NP	-	18.60
	6/18/2007	17.70	NP	-	18.04
	9/17/2007	18.30	NP	-	17.44
	12/17/2007	17.96	NP	-	17.78
	1/22/2008	17.00	NP	-	18.74
	3/24/2008	17.15	NP	-	18.59
	6/23/2008	17.39	NP	-	18.35
	9/22/2008	18.10	NP	-	17.64
	1/5/2009	17.80	NP	-	17.94
	3/16/2009	17.69	17.63	0.06	18.10
	6/15/2009	17.39	NP	-	18.35
	9/18/2009	NM	NM	NM	NM
	12/21/2009	NM	NM	NM	NM
	3/16/2010	18.23	17.04	1.19	18.46
	6/21/2010	18.20	16.80	1.40	18.66
	9/20/2010	18.25	17.80	0.45	17.85
	12/14/2010	17.87	17.18	0.69	18.42
	3/21/2011	19.19	15.80	3.39	19.26
	6/8/2011	18.72	16.03	2.69	19.17
	9/26/2011	18.10	17.65	0.45	18.00
	12/12/2011	10.16	NP	0.00	25.58

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>B-27</b>	3/26/2012	16.92	16.70	0.22	19.00
	6/26/2012	17.20	16.8	0.40	18.86
	9/24/2012	17.73	NP	-	18.01
	12/17/2012	17.16	16.9	0.26	18.79
	3/25/2013	17.11	17.09	0.02	18.65
	6/17/2013	17.21	17.2	0.01	18.54
	9/9/2013	17.85	NP	-	17.89
	12/4/2013	NM	NM	NM	NM
	3/3/2014	17.56	17.54	0.02	18.18
	6/18/2014	17.19	17.02	0.17	18.69
	8/26/2014	17.57	17.54	0.02	18.17
	12/8/2014	17.60	NP	-	18.14
	3/3/2015	17.65	16.79	0.86	18.78
	<b>6/9/2015</b>	<b>17.39</b>	<b>NP</b>	-	<b>18.35</b>
	<b>8/19/2015</b>	<b>17.91</b>	<b>NP</b>	-	<b>17.83</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>B-35</b>	2/14/2000	15.71	NP	-	17.85
(33.56)	5/22/2000	16.00	NP	-	17.56
	8/22/2000	16.36	NP	-	17.20
	11/27/2000	16.71	NP	-	16.85
	2/20/2001	16.65	NP	-	16.91
	5/15/2001	15.56	NP	-	18.00
	9/18/2001	16.90	NP	-	16.66
	12/20/2001	15.95	NP	-	17.61
	3/13/2002	15.70	NP	-	17.86
	6/24/2002	16.22	NP	-	17.34
	9/26/2002	16.64	NP	-	16.92
	12/20/2002	16.48	NP	-	17.08
	3/17/2003	15.91	NP	-	17.65
	6/26/2003	16.13	NP	-	17.43
	9/24/2003	16.67	NP	-	16.89
	12/30/2003	16.04	NP	-	17.52
	3/29/2004	15.81	NP	-	17.75
	6/29/2004	16.33	NP	-	17.23
	9/27/2004	16.61	NP	-	16.95
	12/14/2004	16.52	NP	-	17.04
	3/7/2005	16.52	NP	-	17.04
	6/20/2005	16.17	NP	-	17.39
	9/19/2005	16.63	NP	-	16.93
	12/12/2005	16.08	NP	-	17.48
	3/13/2005	15.42	NP	-	18.14
	6/26/2006	15.95	NP	-	17.61
	9/25/2006	16.30	NP	-	17.26
	12/11/2006	15.90	15.90	sheen	17.66
	3/19/2007	15.52	NP	-	18.04
(33.54)	6/18/2007	16.04	NP	-	17.50
	9/17/2007	16.53	NP	-	17.01
	12/17/2007	15.59	NP	-	17.95
	1/22/2008	15.51	NP	-	18.03
	3/24/2008	15.68	NP	-	17.86
	6/23/2008	15.95	NP	-	17.59
	9/22/2008	16.40	NP	-	17.14
	1/5/2009	15.40	NP	-	18.14
	3/16/2009	15.95	NP	-	17.59
	6/15/2009	16.03	NP	-	17.51
	9/14/2009	16.38	NP	-	17.16
	12/21/2009	15.88	NP	-	17.66
	3/16/2010	15.72	NP	-	17.82
	6/21/2010	15.45	NP	-	18.09
	9/20/2010	16.02	NP	-	17.52
	12/14/2010	15.38	NP	-	18.16
	3/21/2011	14.80	NP	-	18.74
	6/9/2011	14.15	NP	-	19.39
	9/26/2011	16.01	NP	-	17.53
	12/12/2011	15.75	NP	-	17.79

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>B-35</b>	3/26/2012	15.08	NP	-	18.46
	6/26/2012	15.46	NP	-	18.08
	9/24/2012	15.94	NP	-	17.60
	12/17/2012	15.24	NP	-	18.30
	3/25/2013	15.60	NP	-	17.94
	6/17/2013	15.66	NP	-	17.88
	9/9/2013	16.02	NP	-	17.52
	12/4/2013	16.09	NP	-	17.45
	3/3/2014	15.62	NP	-	17.92
	6/18/2014	15.55	NP	-	17.99
	8/26/2014	15.87	NP	-	17.67
	12/8/2014	17.50	NP	-	16.04
	3/3/2015	15.43	NP	-	18.11
	<b>6/9/2015</b>	<b>16.94</b>	<b>NP</b>		<b>16.60</b>
	<b>8/19/2015</b>	<b>16.15</b>	<b>NP</b>	-	<b>17.39</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>B-36</b>	2/14/2000	14.33	NP	-	16.69
(31.02)	5/22/2000	14.64	NP	-	16.38
	8/22/2000	15.28	NP	-	15.74
	11/27/2000	15.55	NP	-	15.47
	2/20/2001	15.48	NP	-	15.54
	5/15/2001	15.47	NP	-	15.55
	9/18/2001	15.83	NP	-	15.19
	12/20/2001	14.17	NP	-	16.85
	3/13/2002	14.31	NP	-	16.71
	6/24/2002	15.06	NP	-	15.96
	9/26/2002	15.43	NP	-	15.59
	12/20/2002	14.98	NP	-	16.04
	3/17/2003	14.35	NP	-	16.67
	6/26/2003	15.09	NP	-	15.93
	9/24/2003	15.44	NP	-	15.58
	12/30/2003	14.41	NP	-	16.61
	3/29/2004	14.53	NP	-	16.49
	6/29/2004	15.19	NP	-	15.83
	9/27/2004	15.41	NP	-	15.61
	12/14/2004	15.10	NP	-	15.92
	3/7/2005	15.39	NP	-	15.63
	6/20/2005	15.08	NP	-	15.94
	9/19/2005	15.45	NP	-	15.57
	12/12/2005	14.68	NP	-	16.34
	3/13/2006	13.97	NP	-	17.05
	6/26/2006	14.64	NP	-	16.38
	9/25/2006	15.12	NP	-	15.90
	12/11/2007	14.46	NP	-	16.56
	3/19/2007	13.98	NP	-	17.04
(31.00)	6/18/2007	15.04	NP	-	15.96
	9/17/2007	15.39	NP	-	15.61
	12/17/2007	15.56	NP	-	15.44
	3/24/2008	14.57	NP	-	16.43
	6/23/2008	14.69	NP	-	16.31
	9/22/2008	15.30	NP	-	15.70
	1/5/2009	13.48	NP	-	17.52
	3/16/2009	14.72	NP	-	16.28
	6/15/2009	14.91	NP	-	16.09
	9/14/2009	15.16	NP	-	15.84
	12/21/2009	14.06	NP	-	16.94
	3/16/2010	14.10	NP	-	16.90
	6/21/2010	14.52	NP	-	16.48
	9/20/2010	14.02	NP	-	16.98
	12/14/2010	12.99	NP	-	18.01
	3/21/2011	12.77	NP	-	18.23
	6/9/2011	11.63	NP	-	19.37
	9/26/2011	14.19	NP	-	16.81
	12/12/2011	13.83	NP	-	17.17
	3/26/2012	13.29	NP	-	17.71

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>B-36</b>	6/26/2012	13.75	NP	-	17.25
	9/24/2012	14.55	NP	-	16.45
	12/17/2012	13.24	NP	-	17.76
	3/25/2013	14.21	NP	-	16.79
	6/17/2013	14.39	NP	-	16.61
	9/9/2013	15.01	NP	-	15.99
	12/4/2013	15.02	NP	-	15.98
	3/3/2014	14.33	NP	-	16.67
	6/18/2014	14.16	NP	-	16.84
	8/26/2014	14.55	NP	-	16.45
	12/8/2014	14.23	NP	-	16.77
	3/3/2015	13.75	NP	-	17.25
	<b>6/9/2015</b>	<b>14.36</b>	<b>NP</b>	-	<b>16.64</b>
	<b>8/19/2015</b>	<b>14.75</b>	<b>NP</b>	-	<b>16.25</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>B-37</b>	2/14/2000	18.96	NP	-	16.87
(35.83)	5/22/2000	19.05	NP	-	16.78
	8/22/2000	19.77	NP	-	16.06
	11/27/2000	20.18	NP	-	15.65
	2/20/2001	22.05	NP	-	13.78
	5/15/2001	20.16	NP	-	15.67
	9/18/2001	----- Well Has Been Buried -----			
	12/20/2001	---Could Not Locate---			
	3/13/2002	19.09	NP	-	16.74
	6/24/2002	19.58	NP	-	16.25
	9/26/2002	20.00	NP	-	15.83
	12/20/2002	20.08	NP	-	15.75
	3/17/2003	19.17	NP	-	16.66
	6/26/2003	19.52	NP	-	16.31
	9/24/2003	19.88	NP	-	15.95
	12/31/2003	----Well Covered with Ice----			
	3/29/2004	19.07	NP	-	16.76
	6/29/2004	19.96	NP	-	15.87
	9/27/2004	19.88	NP	-	15.95
	12/14/2004	19.76	NP	-	16.07
	3/7/2005	20.92	NP	-	14.91
	6/20/2005	19.57	NP	-	16.26
	9/19/2005	19.89	NP	-	15.94
	12/12/2005	19.40	NP	-	16.43
	3/13/2006	18.42	NP	-	17.41
	6/26/2006	---Unable to locate well; under sand---			
	9/25/2006	19.08	NP	-	16.75
	12/11/2006	NM	NM	NM	NM
	3/19/2007	18.69	NP	-	17.14
(35.79)	6/18/2007	19.28	NP	-	16.51
	9/17/2007	19.77	NP	-	16.02
	12/17/2007	19.40	NP	-	16.39
	1/22/2008	18.64	NP	-	17.15
	3/24/2008	18.81	NP	-	16.98
	6/23/2008	19.00	NP	-	16.79
	9/22/2008	19.52	NP	-	16.27
	1/5/2009	18.50	NP	-	17.29
	3/16/2009	19.02	NP	-	16.77
	6/15/2009	19.19	NP	-	16.60
	9/14/2009	20.42	NP	-	15.37
	12/21/2009	NM	NM	NM	NM
	3/16/2010	19.57	NP	-	16.22
	6/21/2010	18.92	NP	-	16.87
	9/20/2010	19.56	NP	-	16.23
	12/14/2010	18.86	NP	-	16.93
	3/21/2011	18.32	NP	-	17.47
	6/9/2011	17.58	NP	-	18.21
	9/26/2011	19.51	NP	-	16.28
	12/12/2011	19.36	NP	-	16.43

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>B-37</b>	3/26/2012	18.88	NP	-	16.91
	6/26/2012	19.09	NP	-	16.70
	9/24/2012	19.89	NP	-	15.90
	12/17/2012	18.86	NP	-	16.93
	3/25/2013	19.61	NP	-	16.18
	6/17/2013	19.84	NP	-	15.95
	9/9/2013	20.45	NP	-	15.34
	12/4/2013	20.62	NP	-	15.17
	3/3/2014	20.10	NP	-	15.69
	6/18/2014	19.45	NP	-	16.34
	8/26/2014	19.85	NP	-	15.94
	12/8/2014	NM	NP	-	NM
	3/3/2015	19.05	NP	-	16.74
	<b>6/9/2015</b>	<b>19.61</b>	<b>NP</b>	<b>-</b>	<b>16.18</b>
	<b>8/19/2015</b>	<b>20.04</b>	<b>NP</b>	<b>-</b>	<b>15.75</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>B-38</b>	9/26/2002	20.91	20.69	0.22	15.74
(36.65)	12/20/2002	20.53	20.75	0.22	16.12
	3/17/2003	19.71	NP	-	16.94
	6/26/2003	20.10	NP	-	16.55
	9/24/2003		Dry at 20.41 feet bgs		
	12/30/2003	19.93	NP	-	16.72
	3/29/2004	Dry	NP	-	-
	6/29/2004		Dry at 20.23 feet bgs		
	9/27/2004	Dry	NP	-	-
	6/20/2005	20.10	NP	-	16.55
	9/19/2005	20.22	NP	-	16.43
	12/12/2005	19.91	NP	-	16.74
	3/13/2006	18.90	NP	-	17.75
	6/26/2006	Dry	NP	-	-
	9/25/2006	19.60	NP	-	17.05
	12/11/2006	19.71	NP	-	16.94
	3/19/2007	19.26	NP	-	17.39
(36.07)	6/18/2007	Dry	NP	-	-
	9/17/2007	Dry	NP	-	-
	12/17/2007	19.85	NP	-	16.22
	3/24/2008	19.49	NP	-	16.58
	6/23/2008	Dry	NP	-	-
	9/22/2008	Dry	NP	-	-
	1/5/2009	18.93	NP	-	17.14
	3/16/2009	19.55	NP	-	16.52
	6/15/2009	Dry	NP	-	-
	9/14/2009	17.90	NP	-	18.17
	12/21/2009	NM	NM	NM	NM
	3/16/2010	19.89	NP	-	16.18
	6/21/2010	19.28	NP	-	16.79
	9/20/2010	19.88	NP	-	16.19
	12/14/2010	19.09	NP	-	16.98
	3/21/2011	18.63	NP	-	17.44
	6/9/2011	17.90	17.86	0.04	18.20
	9/26/2011	19.56	NP	-	16.51
	12/12/2011	19.61	NP	-	16.46
	3/26/2012	19.22	19.16	0.06	16.90
	6/26/2012	19.44	NP	-	16.63
	9/24/2012	20.14	NP	-	15.93
	12/17/2012	19.19	19.16	0.03	16.90
	3/25/2013	20.04	19.99	0.05	16.07
	6/17/2013	20.24	NP	-	15.83
	9/9/2013	20.91	NP	-	15.16
	12/4/2013	20.98	NP	-	15.09
	3/3/2014	20.52	NP	-	15.55
	6/18/2014	19.88	NP	-	16.19
	8/26/2014	20.22	NP	-	15.85
	12/8/2014	20.12	NP	-	15.95
	3/3/2015	19.40	NP	-	16.67

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
Phillips 66 Company - Willbridge Terminal  
Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
	<b>6/9/2015</b>	<b>20.04</b>	<b>NP</b>	-	<b>16.03</b>
	<b>8/19/2015</b>	<b>20.48</b>	<b>NP</b>	-	<b>15.59</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>B-40</b>	2/14/2000	17.34	NP	-	17.36
(34.70)	5/22/2000	18.28	17.48	0.80	17.06
	8/22/2000	19.65	18.21	1.44	16.20
	11/27/2000	20.03	18.55	1.48	15.85
	2/20/2001	19.85	18.54	1.31	15.90
	5/15/2001	19.88	18.58	1.30	15.86
	9/18/2001	20.90	19.07	1.83	15.26
	12/20/2001	18.35	17.36	0.99	17.14
	3/13/2002	17.51	17.32	0.19	17.34
	6/24/2002	18.36	18.24	0.12	16.44
	9/26/2002	19.22	18.53	0.69	16.03
	12/20/2002	18.27	18.81	0.54	16.86
	3/17/2003	18.12	17.45	0.67	17.12
	6/26/2003	18.47	18.30	0.17	16.37
	9/24/2003	18.61	18.51	0.10	16.17
	12/30/2003	17.64	17.58	0.06	17.11
	3/29/2004	17.70	17.69	0.01	17.01
	6/29/2004	18.58	18.58	sheen	16.12
	9/27/2004	18.76	18.76	sheen	15.94
	12/14/2004	18.18	18.17	0.01	16.53
	3/7/2005	18.35	18.35	sheen	16.35
	6/20/2005	18.37	18.36	0.01	16.34
	9/19/2005	18.55	18.55	sheen	16.15
	12/12/2005	17.71	16.81	0.90	17.71
	3/13/2006	17.14	NP	-	17.56
	6/26/2006	17.76	NP	-	16.94
	9/25/2006	18.01	NP	-	16.69
	12/11/2006	18.22	17.95	0.27	16.70
	3/19/2007	15.57	NP	-	19.13
(33.68)	6/18/2007	18.40	NP	-	15.28
	9/17/2007	18.75	18.75	sheen	14.93
	12/17/2007	17.98	17.94	0.04	15.73
	1/22/2008	17.54	NP	-	16.14
	3/24/2008	17.85	NP	-	15.83
	6/23/2008	17.93	17.92	0.01	15.76
	9/22/2008	18.50	18.50	sheen	15.18
	1/5/2009	17.19	16.75	0.44	16.84
	3/16/2009	18.36	17.79	0.57	15.78
	6/15/2009	18.24	18.20	0.04	15.47
	9/14/2009	17.92	NP	-	15.76
	12/21/2009	17.25	NP	-	16.43
	3/16/2010	17.11	17.10	0.01	16.58
	6/21/2010	16.07	16.06	0.01	17.62
	9/20/2010	16.69	16.68	0.01	17.00
	12/14/2010			Inaccessible	
(34.70)	3/21/2011	15.50	NP	-	18.18
	6/9/2011	14.32	14.28	0.04	19.39
	9/26/2011	16.75	16.71	0.04	16.96
	12/12/2011	16.38	16.37	0.01	17.31

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>B-40</b>	3/26/2012	16.51	16.30	0.21	17.34
	6/26/2012	16.74	16.73	0.01	16.95
	9/24/2012	17.71	17.3	0.41	16.30
	12/17/2012	NM	NM	NM	NM
	3/25/2013	17.34	17.33	0.01	16.35
	6/17/2013	17.50	17.33	0.17	16.32
	9/9/2013	18.11	NP	-	15.57
	12/4/2013	18.17	NP	-	15.51
	3/3/2014	17.55	NP	-	16.13
	6/18/2014	16.96	NP	-	16.72
	8/26/2014	17.29	NP	-	16.39
	12/8/2014	17.09	NP	-	16.59
	3/3/2015	16.42	NP	-	17.26
	<b>6/9/2015</b>	<b>17.15</b>	<b>NP</b>	-	<b>16.53</b>
	<b>8/19/2015</b>	<b>17.55</b>	<b>NP</b>	-	<b>16.13</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>B-41</b>	2/14/2000	17.73	NP	-	16.90
(34.63)	5/22/2000	18.89	NP	-	15.74
	8/22/2000	18.44	NP	-	16.19
	11/27/2000	18.81	NP	-	15.82
	2/20/2001	18.78	18.78	sheen	15.85
	5/15/2001	18.78	NP	-	15.85
	9/18/2001			----- Well Has Been Buried -----	
	12/20/2001	16.86	NP	-	17.77
	3/13/2002	20.07	20.03	0.04	14.59
	6/24/2002	20.54	20.52	0.02	14.11
	9/26/2002	18.75	18.72	0.03	15.90
				----- Well Abandoned December 9, 2002 -----	
<b>B-41A</b>	12/20/2002	19.13	NP	-	16.00
(35.13)	3/17/2003	18.40	NP	-	16.73
	6/26/2003	18.73	NP	-	16.40
	9/24/2003	19.10	NP	-	16.03
	12/30/2003	18.61	NP	-	16.52
	3/29/2004	18.32	NP	-	16.81
	6/29/2004	18.82	NP	-	16.31
	9/27/2004	19.11	NP	-	16.02
	12/14/2004	19.00	NP	-	16.13
	3/7/2005	19.07	NP	-	16.06
	6/20/2005	18.80	NP	-	16.33
	9/19/2005	19.13	NP	-	16.00
	12/12/2005	18.65	NP	-	16.48
	3/13/2006	17.71	NP	-	17.42
	6/26/2006	18.25	NP	-	16.88
	9/25/2006	18.60	NP	-	16.53
	12/11/2006	18.54	NP	-	16.59
	3/19/2007	18.04	NP	-	17.09
	6/18/2007	18.62	NP	-	16.51
	9/17/2007	19.06	NP	-	16.07
	12/17/2007	18.65	NP	-	16.48
	1/22/2008	18.14	NP	-	16.99
	3/24/2008	18.20	NP	-	16.93
	6/23/2008	18.39	NP	-	16.74
	9/22/2008	18.80	NP	-	16.33
	1/5/2009	17.91	NP	-	17.22
	3/16/2009	18.44	NP	-	16.69
	6/15/2009	18.55	NP	-	16.58
	9/14/2009	18.69	NP	-	16.44
	12/21/2009	18.23	NP	-	16.90
	3/16/2010	17.92	NP	-	17.21
	6/21/2010	17.36	NP	-	17.77
	9/20/2010	17.99	NP	-	17.14
	12/14/2010	17.29	NP	-	17.84
	3/21/2011	16.75	NP	-	18.38
	6/9/2011	16.20	NP	-	18.93
	9/26/2011	17.93	NP	-	17.20

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>B-41A</b>	12/12/2011	17.74	NP	-	17.39
	3/26/2012	17.27	NP	-	17.86
	6/26/2012	17.50	NP	-	17.63
	9/24/2012	18.22	NP	-	16.91
	12/17/2012	17.30	NP	-	17.83
	3/25/2013	17.91	NP	-	17.22
	6/17/2013	18.11	NP	-	17.02
	9/9/2013	18.66	NP	-	16.47
	12/4/2013	18.80	NP	-	16.33
	3/3/2014	18.30	NP	-	16.83
	12/8/2014	18.07	NP	-	17.06
	3/3/2015	17.50	NP	-	17.63
	<b>6/9/2015</b>	<b>18.00</b>	<b>NP</b>	-	<b>17.13</b>
	<b>8/19/2015</b>	<b>18.41</b>	<b>NP</b>	-	<b>16.72</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>DW-1</b>	2/14/2000	18.87	NP	-	17.06
(35.93)	5/22/2000	18.94	NP	-	16.99
	8/22/2000	19.51	NP	-	16.42
	11/27/2000	19.88	NP	-	16.05
	2/20/2001	19.83	NP	-	16.10
	5/15/2001	19.87	NP	-	16.06
	9/18/2001	20.19	NP	-	15.74
	12/20/2001	19.56	NP	-	16.37
	3/13/2002	18.96	NP	-	16.97
	6/24/2002	19.38	NP	-	16.55
	9/26/2002	19.77	NP	-	16.16
	12/20/2002	19.77	NP	-	16.16
	3/17/2003	18.85	NP	-	17.08
	6/26/2003	19.33	NP	-	16.60
	9/24/2003	19.66	NP	-	16.27
	12/30/2003	19.27	NP	-	16.66
	3/29/2004	18.87	NP	-	17.06
	6/29/2004	19.39	NP	-	16.54
	9/27/2004	19.69	NP	-	16.24
	12/14/2004	19.65	NP	-	16.28
	3/7/2005	19.66	NP	-	16.27
	6/20/2005	19.41	NP	-	16.52
	9/19/2005	19.71	NP	-	16.22
	12/12/2005	19.30	NP	-	16.63
	3/13/2006	18.30	NP	-	17.63
	6/26/2006	18.85	NP	-	17.08
	9/25/2006	19.15	NP	-	16.78
	12/11/2006	19.12	NP	-	16.81
	3/19/2007	18.62	NP	-	17.31
(35.90)	6/18/2007	19.05	NP	-	16.85
	9/17/2007	19.60	NP	-	16.30
	12/17/2007	19.22	NP	-	16.68
	3/24/2008	18.76	NP	-	17.14
	6/23/2008	NM	NM	NM	NM
	9/22/2008	19.46	NP	-	16.44
	1/5/2009	18.63	NP	-	17.27
	3/16/2009	19.02	NP	-	16.88
	6/15/2009	19.12	19.11	0.01	16.79
	9/14/2009	20.39	NP	-	15.51
	12/21/2009	20.01	NP	-	15.89
	3/16/2010	19.66	NP	-	16.24
	6/21/2010	19.19	NP	-	16.71
	9/20/2010	19.80	NP	-	16.10
	12/14/2010	19.19	NP	-	16.71
	3/21/2011	18.59	NP	-	17.31
	6/9/2011	18.14	NP	-	17.76
	9/26/2011	19.73	NP	-	16.17
	12/12/2011	19.61	NP	-	16.29
	3/26/2012	19.04	NP	-	16.86

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>DW-1</b>	6/26/2012	19.24	NP	-	16.66
	9/24/2012	19.94	NP	-	15.96
	12/17/2012	19.10	NP	-	16.80
	3/25/2013	19.62	NP	-	16.28
	6/17/2013	19.82	NP	-	16.08
	9/9/2013	20.31	NP	-	15.59
	12/4/2013	20.45	NP	-	15.45
	3/3/2014	19.98	NP	-	15.92
	6/18/2014	19.53	NP	-	16.37
	8/26/2014	19.84	NP	-	16.06
	12/8/2014	19.81	NP	-	16.09
	3/3/2015	19.25	NP	-	16.65
	<b>6/9/2015</b>	<b>19.71</b>	<b>NP</b>	-	<b>16.19</b>
	<b>8/19/2015</b>	<b>20.11</b>	<b>NP</b>	-	<b>15.79</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>DW-2</b>	2/14/2000	18.91	NP	-	17.14
(36.05)	5/22/2000	19.03	NP	-	17.02
	8/22/2000	19.62	NP	-	16.43
	11/27/2000	10.01	NP	-	26.04
	2/20/2001	20.02	NP	-	16.03
	5/15/2001	20.00	NP	-	16.05
	9/18/2001	20.35	NP	-	15.70
	12/20/2001	19.62	NP	-	16.43
	3/13/2002	19.06	NP	-	16.99
	6/24/2002	19.44	NP	-	16.61
	9/26/2002	19.85	NP	-	16.20
	12/20/2002	19.88	NP	-	16.17
	3/17/2003	18.97	NP	-	17.08
	6/26/2003	19.40	NP	-	16.65
	9/24/2003	19.78	NP	-	16.27
	12/30/2003	19.37	NP	-	16.68
	3/29/2004	18.97	NP	-	17.08
	6/29/2004	19.46	NP	-	16.59
	9/27/2004	19.85	NP	-	16.20
	12/14/2004	19.75	NP	-	16.30
	3/7/2005	19.74	NP	-	16.31
	6/20/2005	19.49	NP	-	16.56
	9/19/2005	19.81	NP	-	16.24
	12/12/2005	19.41	NP	-	16.64
	3/13/2006	18.40	NP	-	17.65
	6/26/2006	18.89	NP	-	17.16
	9/25/2006	19.25	NP	-	16.80
	12/11/2006	19.23	19.22	0.01	16.83
	3/19/2007	18.69	NP	-	17.36
(36.04)	6/18/2007	19.15	NP	-	16.89
	9/17/2007	19.69	NP	-	16.35
	12/17/2007	19.33	NP	-	16.71
	3/24/2008	18.84	NP	-	17.20
	6/23/2008	18.99	NP	-	17.05
	9/22/2008	19.56	NP	-	16.48
	1/5/2009	18.65	NP	-	17.39
	3/16/2009	19.12	NP	-	16.92
	6/15/2009	19.13	NP	-	16.91
	9/14/2009	20.34	NP	-	15.70
	12/21/2009	NM	NM	NM	NM
	3/16/2010	19.59	NP	-	16.45
	6/21/2010	NM	NM	NM	NM
	9/20/2010	NM	NM	NM	NM
	12/14/2010	19.06	NP	-	16.98
	3/21/2011	18.45	NP	-	17.59
	6/9/2011	17.93	NP	-	18.11
	9/26/2011	19.61	NP	-	16.43
	12/12/2011	19.49	NP	-	16.55
	3/26/2012	18.92	NP	-	17.12

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>DW-2</b>	6/26/2012	19.10	NP	-	16.94
	9/24/2012	19.85	NP	-	16.19
	12/17/2012	18.95	NP	-	17.09
	3/25/2013	19.51	NP	-	16.53
	6/17/2013	19.73	NP	-	16.31
	9/9/2013	20.26	NP	-	15.78
	12/4/2013	20.41	NP	-	15.63
	3/3/2014	19.93	NP	-	16.11
	6/18/2014	19.42	NP	-	16.62
	8/26/2014	19.74	NP	-	16.30
	12/8/2014	19.72	NP	-	16.32
	3/3/2015	19.10	NP	-	16.94
	<b>6/9/2015</b>	<b>19.60</b>	<b>NP</b>	-	<b>16.44</b>
	<b>8/19/2015</b>	<b>20.02</b>	<b>NP</b>	-	<b>16.02</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>EW-1</b>	1/22/2008	12.30	NP	-	6.01
(18.31)	6/23/2008	5.24	NP	-	13.07
	9/22/2008	8.49	NP	-	9.82
	1/5/2009	12.00	NP	-	6.31
	3/16/2009	NM	NM	NM	NM
	6/15/2009	NM	NM	NM	NM
	9/14/2009	NM	NM	NM	NM
	12/21/2009	NM	NM	NM	NM
	3/16/2010	NM	NM	NM	NM
	6/21/2010	NM	NM	NM	NM
	9/20/2010	NM	NM	NM	NM
	12/14/2010	NM	NM	NM	NM
	3/21/2011	NM	NM	NM	NM
	6/9/2011	NM	NM	NM	NM
	9/26/2011	NM	NM	NM	NM
	12/12/2011	NM	NM	NM	NM
	3/26/2012	NM	NM	NM	NM
	6/26/2012	NM	NM	NM	NM
	9/24/2012	NM	NM	NM	NM
	12/17/2012	NM	NM	NM	NM
	3/25/2013	NM	NM	NM	NM
	6/17/2013	NM	NM	NM	NM
	9/9/2013	NM	NM	NM	NM
	12/4/2013	NM	NM	NM	NM
	3/3/2014	NM	NM	NM	NM
	6/18/2014	NM	NM	NM	NM
	8/26/2014	NM	NM	NM	NM
	12/8/2014	NM	NM	NM	NM
	3/3/2015	NM	NM	NM	NM
	<b>6/9/2015</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>
	<b>8/19/2015</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>EW-2</b>	1/22/2008	10.70	NP	-	7.08
(17.78)	6/23/2008	9.82	NP	-	7.96
	9/22/2008	5.75	NP	-	12.03
	1/5/2009	11.00	NP	-	6.78
	3/16/2009	NM	NM	NM	NM
	6/15/2009	NM	NM	NM	NM
	9/14/2009	NM	NM	NM	NM
	12/21/2009	NM	NM	NM	NM
	3/16/2010	NM	NM	NM	NM
	6/21/2010	NM	NM	NM	NM
	9/20/2010	NM	NM	NM	NM
	12/14/2010	NM	NM	NM	NM
	3/21/2011	NM	NM	NM	NM
	6/9/2011	NM	NM	NM	NM
	9/26/2011	NM	NM	NM	NM
	12/12/2011	NM	NM	NM	NM
	3/26/2012	NM	NM	NM	NM
	6/26/2012	NM	NM	NM	NM
	9/24/2012	NM	NM	NM	NM
	12/17/2012	NM	NM	NM	NM
	3/25/2013	NM	NM	NM	NM
	6/17/2013	NM	NM	NM	NM
	9/9/2013	NM	NM	NM	NM
	12/4/2013	NM	NM	NM	NM
	3/3/2014	NM	NM	NM	NM
	6/18/2014	NM	NM	NM	NM
	8/26/2014	NM	NM	NM	NM
	12/8/2014	NM	NM	NM	NM
	3/3/2015	NM	NM	NM	NM
	<b>6/9/2015</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>
	<b>8/19/2015</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>EW-3</b>	1/22/2008	10.13	NP	-	4.89
(15.02)	6/23/2008	10.68	NP	-	4.34
	9/22/2008	11.30	NP	-	3.72
	1/5/2009	10.00	NP	-	5.02
	3/16/2009	NM	NM	NM	NM
	6/15/2009	NM	NM	NM	NM
	9/14/2009	NM	NM	NM	NM
	12/21/2009	NM	NM	NM	NM
	3/16/2010	NM	NM	NM	NM
	6/21/2010	NM	NM	NM	NM
	9/20/2010	NM	NM	NM	NM
	12/14/2010	NM	NM	NM	NM
	3/21/2011	NM	NM	NM	NM
	6/9/2011	NM	NM	NM	NM
	9/26/2011	NM	NM	NM	NM
	12/12/2011	NM	NM	NM	NM
	3/26/2012	NM	NM	NM	NM
	6/26/2012	NM	NM	NM	NM
	9/24/2012	NM	NM	NM	NM
	12/17/2012	NM	NM	NM	NM
	3/25/2013	NM	NM	NM	NM
	6/17/2013	NM	NM	NM	NM
	9/9/2013	NM	NM	NM	NM
	12/4/2013	NM	NM	NM	NM
	3/3/2014	NM	NM	NM	NM
	6/18/2014	NM	NM	NM	NM
	8/26/2014	NM	NM	NM	NM
	12/8/2014	NM	NM	NM	NM
	3/3/2015	NM	NM	NM	NM
	<b>6/9/2015</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>
	<b>8/19/2015</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>EW-4</b>	1/22/2008	12.15	NP	-	5.48
(17.63)	6/23/2008	12.04	NP	-	5.59
	9/22/2008	13.15	NP	-	4.48
	1/5/2009	12.20	NP	-	5.43
	3/16/2009	NM	NM	NM	NM
	6/15/2009	NM	NM	NM	NM
	9/14/2009	NM	NM	NM	NM
	12/21/2009	NM	NM	NM	NM
	3/16/2010	NM	NM	NM	NM
	6/21/2010	NM	NM	NM	NM
	9/20/2010	NM	NM	NM	NM
	12/14/2010	NM	NM	NM	NM
	3/21/2011	NM	NM	NM	NM
	6/9/2011	NM	NM	NM	NM
	9/26/2011	NM	NM	NM	NM
	12/12/2011	NM	NM	NM	NM
	3/26/2012	NM	NM	NM	NM
	6/26/2012	NM	NM	NM	NM
	9/24/2012	NM	NM	NM	NM
	12/17/2012	NM	NM	NM	NM
	3/25/2013	NM	NM	NM	NM
	6/17/2013	NM	NM	NM	NM
	9/9/2013	NM	NM	NM	NM
	12/4/2013	NM	NM	NM	NM
	3/3/2014	NM	NM	NM	NM
	6/18/2014	NM	NM	NM	NM
	8/26/2014	NM	NM	NM	NM
	12/8/2014	NM	NM	NM	NM
	3/3/2015	NM	NM	NM	NM
	<b>6/9/2015</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>
	<b>8/19/2015</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>EX-39</b>	2/14/2000	17.42	17.09	0.33	15.93
(33.09)	5/22/2000	17.35	17.29	0.06	15.79
	8/22/2000	17.98	17.95	0.03	15.13
	11/27/2000	18.38	18.38	sheen	14.71
	2/20/2001	18.49	18.36	0.13	14.70
	5/15/2001	19.29	18.19	1.10	14.68
	9/18/2001			----- Well Has Been Buried -----	
	12/20/2001	----Well Damaged During Construction Activities----			
	3/13/2002	----Well Damaged During Construction Activities----			
	6/24/2002	----Well Damaged During Construction Activities----			
	9/26/2002	----Well Damaged During Construction Activities----			
		----- Well Abandoned December 9, 2002 -----			

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>EX-39B</b>	12/20/2002	18.85	18.87	0.02	15.80
(34.63)	3/17/2003	18.15	18.13	0.02	16.50
	6/26/2003	18.71	18.71	sheen	15.92
	9/24/2003	18.98	NP	-	15.65
	12/30/2003	18.30	18.30	sheen	16.33
	3/29/2004	18.12	NP	-	16.51
	6/29/2004	18.37	NP	-	16.26
	9/27/2004	18.83	NP	-	15.80
	12/14/2004	21.18	NP	-	13.45
	3/7/2005	18.97	18.97	sheen	15.66
	6/20/2005	16.85	NP	-	17.78
	9/19/2005	16.65	NP	-	17.98
	12/12/2005	16.67	NP	-	17.96
	3/13/2006	17.20	17.20	sheen	17.43
	6/26/2006	18.00	18.00	sheen	16.63
	9/25/2006	18.68	18.68	sheen	15.95
	12/11/2006	**	18.33	-	-
	3/19/2007	NM	NM	NM	NM
(34.46)	6/18/2007	NM	NM	NM	NM
	9/17/2007	NM	NM	NM	NM
	12/17/2007	NM	NM	NM	NM
	1/22/2008	19.86	NP	-	14.60
	3/24/2008	NM	NM	NM	NM
	6/23/2008	19.14	NP	-	15.49
	9/22/2008	19.46	NP	-	15.17
	1/5/2009	19.88	NP	-	14.58
	3/16/2009	19.70	NP	-	14.76
	6/15/2009	NM	NM	NM	NM
	9/14/2009	NM	NM	NM	NM
	12/21/2009	NM	NM	NM	NM
	3/16/2010	NM	NM	NM	NM
	6/21/2010	NM	NM	NM	NM
	9/20/2010	NM	NM	NM	NM
	12/14/2010	NM	NM	NM	NM
	3/21/2011	NM	NM	NM	NM
	6/9/2011	NM	NM	NM	NM
	9/26/2011	NM	NM	NM	NM
	12/12/2011	NM	NM	NM	NM
	3/26/2012	NM	NM	NM	NM
	6/26/2012	NM	NM	NM	NM
	9/24/2012	NM	NM	NM	NM
	12/17/2012	NM	NM	NM	NM
	3/25/2013	NM	NM	NM	NM

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>EX-39B</b>	6/17/2013	NM	NM	NM	NM
	9/9/2013	NM	NM	NM	NM
	12/4/2013	NM	NM	NM	NM
	3/3/2014	NM	NM	NM	NM
	6/18/2014	NM	NM	NM	NM
	8/26/2014	NM	NM	NM	NM
	12/8/2014	NM	NM	NM	NM
	3/3/2015	NM	NM	NM	NM
	<b>6/9/2015</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>
	8/19/2015	NM	NM	NM	NM

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>IT-E</b>	2/14/2000	19.01	NP	-	17.06
(36.07)	5/22/2000	19.03	NP	-	17.04
	8/22/2000	19.93	NP	-	16.14
	11/27/2000	20.12	NP	-	15.95
	2/20/2001	20.11	NP	-	15.96
	5/15/2001	20.29	NP	-	15.78
	9/18/2001	20.65	NP	-	15.42
	12/20/2001	----Could Not Access Well----			
	3/13/2002	19.31	NP	-	16.76
	6/24/2002	19.80	NP	-	16.27
	9/26/2002	20.18	NP	-	15.89
	12/20/2002	19.95	NP	-	16.12
	3/17/2003	19.25	NP	-	16.82
	6/26/2003	19.68	NP	-	16.39
	9/24/2003	20.01	NP	-	16.06
	12/30/2003	19.45	NP	-	16.62
	3/29/2004	19.28	NP	-	16.79
	6/29/2004	19.79	NP	-	16.28
	9/27/2004	20.05	NP	-	16.02
	12/14/2004	20.00	NP	-	16.07
	3/7/2005	20.11	NP	-	15.96
	6/20/2005	19.74	NP	-	16.33
	9/19/2005	20.18	NP	-	15.89
	12/12/2005	19.65	NP	-	16.42
	3/13/2006	18.62	NP	-	17.45
	6/26/2006	19.30	NP	-	16.77
	9/25/2006	19.65	NP	-	16.42
	12/11/2006	19.47	NP	-	16.60
	3/19/2007	18.97	NP	-	17.10
	6/18/2007	19.64	NP	-	16.43
	9/17/2007	20.06	NP	-	16.01
	12/17/2007	19.56	NP	-	16.51
	3/24/2008	19.23	NP	-	16.84
	6/23/2008	19.39	NP	-	16.68
	9/22/2008	19.85	NP	-	16.22
	1/5/2009	18.86	NP	-	17.21
	3/16/2009	NM	NM	NM	NM
	6/15/2009	NM	NM	NM	NM
	9/14/2009	NM	NM	NM	NM
	12/21/2009	NM	NM	NM	NM
	3/16/2010	NM	NM	NM	NM
	6/21/2010	18.37	NP	-	17.70
	9/20/2010	NM	NM	NM	NM
(36.07)	12/14/2010	NM	NM	NM	NM
	3/21/2011	NM	NM	NM	NM
	6/9/2011	NM	NM	NM	NM
	9/26/2011	18.95	NP	-	17.12
	12/12/2011	18.72	NP	-	17.35
	3/26/2012	18.22	NP	-	17.85

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>IT-E</b>	6/26/2012	18.50	NP	-	17.57
	9/24/2012	19.25	NP	-	16.82
	12/17/2012	18.23	NP	-	17.84
	3/25/2013	18.91	NP	-	17.16
	6/17/2013	19.12	NP	-	16.95
	9/9/2013	19.69	NP	-	16.38
	12/4/2013	19.81	NP	-	16.26
	3/3/2014	19.28	NP	-	16.79
	6/18/2014	18.82	NP	-	17.25
	8/26/2014	19.14	NP	-	16.93
	12/8/2014	19.08	NP	-	16.99
	3/3/2015	18.50	NP	-	17.57
	<b>6/9/2015</b>	<b>19.10</b>	<b>NP</b>	-	<b>16.97</b>
	<b>8/19/2015</b>	<b>19.42</b>	<b>NP</b>	-	<b>16.65</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>IT-W</b>	2/14/2000	17.46	NP	-	18.53
(35.99)	5/22/2000	17.75	NP	-	18.24
	8/22/2000	18.17	NP	-	17.82
	11/27/2000	18.51	NP	-	17.48
	2/20/2001	18.43	NP	-	17.56
	5/15/2001	18.33	NP	-	17.66
	9/18/2001	18.68	NP	-	17.31
	12/20/2001	17.76	NP	-	18.23
	3/13/2002	17.50	NP	-	18.49
	6/24/2002	17.98	NP	-	18.01
	9/26/2002	18.40	NP	-	17.59
	12/20/2002	18.28	NP	-	17.71
	3/17/2003	17.70	NP	-	18.29
	6/26/2003	17.94	NP	-	18.05
	9/24/2003	18.42	NP	-	17.57
	12/30/2003	17.81	NP	-	18.18
	3/29/2004	17.61	NP	-	18.38
	6/29/2004	18.10	NP	-	17.89
	9/27/2004	18.45	NP	-	17.54
	12/14/2004	18.37	NP	-	17.62
	3/7/2005	18.31	NP	-	17.68
	6/20/2005	18.02	NP	-	17.97
	9/19/2005	18.46	NP	-	17.53
	12/12/2005	17.94	NP	-	18.05
	3/13/2006	17.22	NP	-	18.77
	6/26/2006	17.78	NP	-	18.21
	9/25/2006	18.18	NP	-	17.81
	12/11/2006	17.68	NP	-	18.31
	3/19/2007	17.35	NP	-	18.64
(35.91)	6/18/2007	17.84	NP	-	18.07
	9/17/2007	18.34	NP	-	17.57
	12/17/2007	17.79	NP	-	18.12
	3/24/2008	17.40	NP	-	18.51
	6/23/2008	17.75	NP	-	18.16
	9/22/2008	18.21	NP	-	17.70
	1/5/2009	17.38	NP	-	18.53
	3/16/2009	17.75	NP	-	18.16
	6/15/2009	17.80	NP	-	18.11
	9/14/2009	18.16	NP	-	17.75
	12/21/2009	17.68	NP	-	18.23
	3/16/2010	NM	NM	NM	NM
	6/21/2010	17.23	NP	-	18.68
	9/20/2010	17.80	NP	-	18.11
	12/14/2010	17.06	NP	-	18.85
	3/21/2011	16.63	16.61	0.02	19.28
	6/9/2011	16.17	NP	-	19.74
	9/26/2011	17.80	NP	-	18.11
	12/12/2011	17.57	NP	-	18.34
	3/26/2012	16.85	NP	-	19.06

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>IT-W</b>	6/26/2012	17.25	NP	-	18.66
	9/24/2012	17.75	NP	-	18.16
	12/17/2012	17.01	NP	-	18.90
	3/25/2013	17.38	NP	-	18.53
	6/17/2013	17.47	NP	-	18.44
	9/9/2013	17.82	NP	-	18.09
	12/4/2013	17.91	NP	-	18.00
	3/3/2014	17.46	NP	-	18.45
	6/18/2014	17.36	NP	-	18.55
	8/26/2014	17.69	NP	-	18.22
	12/8/2014	17.40	NP	-	18.51
	3/3/2015	17.24	NP	-	18.67
	<b>6/9/2015</b>	<b>17.60</b>	<b>NP</b>	-	<b>18.31</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>P-1</b>	2/14/2000	6.26	NP	-	11.98
(18.24)	5/22/2000	6.89	NP	-	11.35
	8/22/2000	10.51	NP	-	7.73
	11/27/2000	8.62	NP	-	9.62
	2/20/2001	9.14	NP	-	9.10
	5/15/2001	9.17	NP	-	9.07
	9/18/2001	9.97	NP	-	8.27
	12/20/2001	6.01	NP	-	12.23
	3/13/2002	7.07	NP	-	11.17
	6/24/2002	5.89	NP	-	12.35
	9/26/2002	9.13	NP	-	9.11
	12/20/2002	7.87	NP	-	10.37
	3/17/2003	8.38	NP	-	9.86
	6/26/2003			Dry at 10 feet bgs	
	9/24/2003	9.62	NP	-	8.62
	12/30/2003	7.21	NP	-	11.03
	3/29/2004	8.17	NP	-	10.07
	6/29/2004	7.89	NP	-	10.35
(18.24)	9/27/2004	9.19	NP	-	9.05
	12/14/2004	6.79	NP	-	11.45
	3/7/2005	9.16	NP	-	9.08
	6/20/2005	8.80	NP	-	9.44
	9/19/2005	Dry	NP	-	Dry
	12/12/2005	8.38	NP	-	9.86
	3/13/2006	8.56	NP	-	9.68
	6/26/2006	7.60	NP	-	10.64
	9/25/2006	9.03	NP	-	9.21
	12/11/2006	7.40	NP	-	10.84
	3/19/2007	7.54	NP	-	10.70
(18.19)	6/18/2007	8.58	NP	-	9.61
	9/17/2007	9.88	NP	-	8.31
				Well Abandoned	

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>P-1A</b>	12/17/2007	8.53	NP	-	9.95
(18.48)	1/22/2008	8.12	NP	-	10.36
	3/24/2008	7.81	NP	-	10.67
	6/23/2008	5.74	NP	-	12.74
	9/22/2008	9.60	NP	-	8.88
	1/5/2009	6.61	NP	-	11.87
	3/16/2009	6.64	NP	-	11.84
	6/15/2009	8.03	NP	-	10.45
	9/14/2009	9.16	NP	-	9.32
	12/21/2009	7.01	NP	-	11.47
	3/16/2010	7.94	NP	-	10.54
	6/21/2010	6.30	NP	-	12.18
	9/20/2010	7.99	NP	-	10.49
	12/14/2010	5.15	NP	-	13.33
	3/21/2011	5.28	NP	-	13.20
	6/9/2011	NM	NM	NM	NM
	9/26/2011	8.45	NP	-	10.03
	12/12/2011	6.14	NP	-	12.34
	3/26/2012	4.69	NP	-	13.79
	6/26/2012	3.95	NP	-	14.53
	9/24/2012	8.81	NP	-	9.67
	12/17/2012	5.08	NP	-	13.40
	3/25/2013	8.26	NP	-	10.22
	6/17/2013	8.53	NP	-	9.95
	9/9/2013	8.94	NP	-	9.54
	12/4/2013	8.18	NP	-	10.30
	3/3/2014	6.65	NP	-	11.83
	6/18/2014	8.04	NP	-	10.44
	8/26/2014	8.88	NP	-	9.60
	12/8/2014	7.48	NP	-	11.00
	3/3/2015	8.27	NP	-	10.21
	<b>6/9/2015</b>	<b>8.66</b>	<b>NP</b>	-	<b>9.82</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>P-2</b>	2/14/2000	4.18	NP	-	13.67
(17.85)	5/22/2000	4.66	NP	-	13.19
	8/22/2000	5.27	NP	-	12.58
	11/27/2000	5.28	NP	-	12.57
	2/20/2001	5.32	NP	-	12.53
	5/15/2001	5.18	NP	-	12.67
	9/18/2001	5.50	NP	-	12.35
	12/20/2001	4.21	NP	-	13.64
	3/13/2002	4.40	NP	-	13.45
	6/24/2002	3.26	NP	-	14.59
	9/26/2002	5.74	NP	-	12.11
	12/20/2002	5.93	NP	-	11.92
	3/17/2003	4.84	NP	-	13.01
	6/26/2003	5.31	NP	-	12.54
	9/24/2003	5.70	NP	-	12.15
	12/30/2003	4.66	NP	-	13.19
	3/29/2004	4.97	NP	-	12.88
	6/29/2004	5.35	NP	-	12.50
	9/27/2004	5.95	NP	-	11.90
	12/14/2004	4.98	NP	-	12.87
	3/7/2005	5.52	NP	-	12.33
	6/20/2005	5.55	NP	-	12.30
	9/19/2005	5.89	NP	-	11.96
	12/12/2005	5.04	NP	-	12.81
	3/13/2006	4.39	NP	-	13.46
	6/26/2006	4.90	NP	-	12.95
	Well Abandoned				

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>RES-N</b>	2/14/2000	20.90	NP	-	17.68
(38.58)	5/22/2000	21.01	NP	-	17.57
	8/22/2000	21.58	NP	-	17.00
	11/27/2000	21.95	NP	-	16.63
	2/20/2001	21.98	NP	-	16.60
	5/15/2001	21.94	NP	-	16.64
	9/18/2001	22.27	NP	-	16.31
	12/20/2001	21.55	NP	-	17.03
	3/13/2002	21.02	NP	-	17.56
	6/24/2002	21.41	NP	-	17.17
	9/26/2002	21.79	NP	-	16.79
	12/20/2002	21.83	NP	-	16.75
	6/26/2003	21.35	NP	-	17.23
	9/24/2003	21.72	NP	-	16.86
	12/30/2003	21.34	NP	-	17.24
	3/29/2004	20.93	NP	-	17.65
	9/27/2004	21.15	NP	-	17.43
	12/14/2004	21.66	NP	-	16.92
	3/7/2005	21.70	NP	-	16.88
	6/20/2005	21.44	NP	-	17.14
	9/19/2005	21.74	NP	-	16.84
	12/12/2005	21.37	NP	-	17.21
	3/13/2006	20.40	NP	-	18.18
	6/26/2006	22.00	NP	-	16.58
	9/25/2006	21.24	NP	-	17.34
	12/11/2006	21.19	21.19	sheen	17.39
	3/19/2007	19.66	NP	-	18.92
(38.00)	6/18/2007	21.19	NP	-	16.81
	9/17/2007	20.61	NP	-	17.39
	12/17/2007	21.29	NP	-	16.71
	3/24/2008	20.81	NP	-	17.19
	6/23/2008	21.00	NP	-	17.00
	9/22/2008	25.54	NP	-	12.46
	1/5/2009	20.82	NP	-	17.18
	3/16/2009	21.29	NP	-	16.71
	6/15/2009	21.04	21.03	0.01	16.97
	9/14/2009	20.32	NP	-	17.68
	12/21/2009	19.93	NP	-	18.07
	3/16/2010	19.59	NP	-	18.41
	6/21/2010	19.12	NP	-	18.88
	9/20/2010	19.73	NP	-	18.27
	12/14/2010	19.35	NP	-	18.65
	3/21/2011	18.51	18.50	0.01	19.49
	6/9/2011	18.05	NP	-	19.95
	9/26/2011	19.64	NP	-	18.36
	12/12/2011	19.54	NP	-	18.46
	3/26/2012	18.97	NP	-	19.03
	6/26/2012	19.16	NP	-	18.84
	9/24/2012	19.87	NP	-	18.13

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>RES-N</b>	<b>12/17/2012</b>	<b>19.02</b>	<b>NP</b>	-	<b>18.98</b>
	3/25/2013	19.54	NP	-	18.46
	6/17/2013	19.71	NP	-	18.29
	9/9/2013	20.22	NP	-	17.78
	12/4/2013	20.36	NP	-	17.64
	3/3/2014	19.90	NP	-	18.10
	6/18/2014	19.42	NP	-	18.58
	8/26/2014	19.25	NP	-	18.75
	12/8/2014	19.73	NP	-	18.27
	3/3/2015	19.15	NP	-	18.85
	<b>6/9/2015</b>	<b>19.62</b>	<b>NP</b>	-	<b>18.38</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>RES-O</b>	2/14/2000	16.89	NP	-	19.14
(36.03)	5/22/2000	17.29	NP	-	18.74
	8/22/2000	17.86	NP	-	18.17
	11/27/2000	18.38	NP	-	17.65
	2/20/2001	NM	NP	-	-
	5/15/2001	18.04	NP	-	17.99
	9/18/2001	18.43	NP	-	17.60
	12/20/2001	17.63	NP	-	18.40
	3/13/2002	16.87	NP	-	19.16
	6/24/2002	18.52	NP	-	17.51
	9/26/2002	19.23	NP	-	16.80
	12/20/2002	18.35	NP	-	17.68
(36.03)	3/17/2003	17.18	NP	-	18.85
	6/26/2003	17.40	NP	-	18.63
	9/24/2003	18.25	NP	-	17.78
	12/30/2003	17.56	NP	-	18.47
	3/29/2004	16.74	NP	-	19.29
	6/29/2004			No Access To Well	
	9/27/2004			No Access To Well	
	12/14/2004	15.74	NP	-	20.29
	3/7/2005	16.29	NP	-	19.74
	6/20/2005	15.29	15.29	sheen	20.74
	9/19/2005	15.92	NP	-	20.11
	12/12/2005	15.28	NP	-	20.75
	3/13/2006	14.05	NP	-	21.98
	6/26/2006	14.99	NP	-	21.04
	9/25/2006	15.97	NP	-	20.06
	12/11/2006	15.02	NP	-	21.01
	3/19/2007	14.26	NP	-	21.77
(34.65)	6/18/2007	15.20	NP	-	19.45
	9/17/2007	16.03	NP	-	18.62
	12/17/2007	15.21	NP	-	19.44
	3/24/2008	14.34	NP	-	20.31
	6/23/2008	14.99	14.98	0.01	19.67
	9/22/2008	15.84	NP	-	18.81
	1/5/2009	14.55	NP	-	20.10
	3/16/2009	NM	NM	NM	NM
	6/15/2009	NM	NM	NM	NM
	9/14/2009	NM	NM	NM	NM
	12/21/2009	NM	NM	NM	NM
	3/16/2010	NM	NM	NM	NM
	6/21/2010	NM	NM	NM	NM
	9/20/2010	NM	NM	NM	NM
	12/14/2010	NM	NM	NM	NM
	3/21/2011	NM	NM	NM	NM
	6/9/2011	NM	NM	NM	NM
	9/26/2011	NM	NM	NM	NM
	12/12/2011	NM	NM	NM	NM
	3/26/2012	NM	NM	NM	NM

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>RES-O</b>	6/26/2012	NM	NM	NM	NM
	9/24/2012	NM	NM	NM	NM
	12/17/2012	NM	NM	NM	NM
	3/25/2013	NM	NM	NM	NM
	6/17/2013	14.49	NP	-	20.16
	9/9/2013	15.41	NP	-	19.24
	12/4/2013	NM	NM	NM	NM
	3/3/2014	14.85	NP	-	19.80
	6/18/2014	14.50	NP	-	20.15
	8/26/2014	15.24	NP	-	19.41
	12/8/2014	14.61	NP	-	20.04
	3/3/2015	14.47	NP	-	20.18
	<b>6/9/2015</b>	<b>15.05</b>	<b>NP</b>	-	<b>19.60</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>RW-1</b>	1/22/2008	14.30	NP	-	7.44
(21.74)	3/24/2008	NM	NM	NM	NM
	6/23/2008	16.86	NM	NM	4.88
	9/22/2008	18.06	NM	NM	3.68
	1/5/2009	16.08	NM	NM	5.66
	3/16/2009	NM	NM	NM	NM
	6/15/2009	NM	NM	NM	NM
	9/14/2009	NM	NM	NM	NM
	12/21/2009	NM	NM	NM	NM
	3/16/2010	NM	NM	NM	NM
	6/21/2010	NM	NM	NM	NM
	9/20/2010	NM	NM	NM	NM
	12/14/2010	NM	NM	NM	NM
	3/21/2011	NM	NM	NM	NM
	6/9/2011	NM	NM	NM	NM
	9/26/2011	NM	NM	NM	NM
	12/12/2011	NM	NM	NM	NM
	3/26/2012	NM	NM	NM	NM
	6/26/2012	NM	NM	NM	NM
	9/24/2012	NM	NM	NM	NM
	12/17/2012	NM	NM	NM	NM
	3/25/2013	NM	NM	NM	NM
	6/17/2013	NM	NM	NM	NM
	9/9/2013	NM	NM	NM	NM
	12/4/2013	NM	NM	NM	NM
	3/3/2014	NM	NM	NM	NM
	6/18/2014	NM	NM	NM	NM
	8/26/2014	NM	NM	NM	NM
	12/8/2014	NM	NM	NM	NM
	3/3/2015	NM	NM	NM	NM
	<b>6/9/2015</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>RW-2</b>	1/22/2008	18.00	NP	-	9.45
(27.45)	3/24/2008	NM	NM	NM	NM
	6/23/2008	16.57	NM	NM	10.88
	9/22/2008	19.71	NM	NM	7.74
	1/5/2009	16.00	NM	NM	11.45
	3/16/2009	11.30	NM	NM	16.15
	6/15/2009	NM	NM	NM	NM
	9/14/2009	13.30	NM	NM	14.15
	12/21/2009	NM	NM	NM	NM
	3/16/2010	NM	NM	NM	NM
	6/21/2010	NM	NM	NM	NM
	9/20/2010	NM	NM	NM	NM
	12/14/2010	NM	NM	NM	NM
	3/21/2011	NM	NM	NM	NM
	6/9/2011	NM	NM	NM	NM
	9/26/2011	NM	NM	NM	NM
	12/12/2011	NM	NM	NM	NM
	3/26/2012	NM	NM	NM	NM
	6/26/2012	NM	NM	NM	NM
	9/24/2012	NM	NM	NM	NM
	12/17/2012	NM	NM	NM	NM
	3/25/2013	NM	NM	NM	NM
	6/17/2013	NM	NM	NM	NM
	9/9/2013	NM	NM	NM	NM
	12/4/2013	NM	NM	NM	NM
	3/3/2014	NM	NM	NM	NM
	6/18/2014	NM	NM	NM	NM
	8/26/2014	NM	NM	NM	NM
	12/8/2014	NM	NM	NM	NM
	3/3/2015	NM	NM	NM	NM
	<b>6/9/2015</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>RW-3</b>	1/22/2008	NM	NM	NM	NM
(34.02)	3/24/2008	NM	NM	NM	NM
	6/23/2008	23.60	NM	NM	10.42
	9/22/2008	12.01	NM	NM	22.01
	1/5/2009	17.62	NM	NM	16.40
	3/16/2009	NM	NM	NM	NM
	6/15/2009	NM	NM	NM	NM
	9/14/2009	NM	NM	NM	NM
	12/21/2009	NM	NM	NM	NM
	3/16/2010	NM	NM	NM	NM
	6/21/2010	NM	NM	NM	NM
	9/20/2010	NM	NM	NM	NM
	12/14/2010	NM	NM	NM	NM
	3/21/2011	NM	NM	NM	NM
	6/9/2011	NM	NM	NM	NM
	9/26/2011	NM	NM	NM	NM
	12/12/2011	NM	NM	NM	NM
	3/26/2012	NM	NM	NM	NM
	6/26/2012	NM	NM	NM	NM
	9/24/2012	NM	NM	NM	NM
	12/17/2012	NM	NM	NM	NM
	3/25/2013	NM	NM	NM	NM
	6/17/2013	NM	NM	NM	NM
	9/9/2013	NM	NM	NM	NM
	12/4/2013	NM	NM	NM	NM
	3/3/2014	NM	NM	NM	NM
	6/18/2014	NM	NM	NM	NM
	8/26/2014	NM	NM	NM	NM
	12/8/2014	NM	NM	NM	NM
	3/3/2015	NM	NM	NM	NM
	<b>6/9/2015</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>RW-4</b>	1/22/2008	18.94	NP	-	14.87
(33.81)	3/24/2008	NM	NM	NM	NM
	6/23/2008	19.88	NM	NM	13.93
	9/22/2008	19.49	NM	NM	14.32
	1/5/2009	19.90	NM	NM	13.91
	3/16/2009	20.70	NM	NM	13.11
	6/15/2009	NM	NM	NM	NM
	9/14/2009	22.70	NM	NM	11.11
	12/21/2009	NM	NM	NM	NM
	3/16/2010	NM	NM	NM	NM
	6/21/2010	NM	NM	NM	NM
	9/20/2010	NM	NM	NM	NM
	12/14/2010	NM	NM	NM	NM
	3/21/2011	NM	NM	NM	NM
	6/9/2011	NM	NM	NM	NM
	9/26/2011	NM	NM	NM	NM
	12/12/2011	NM	NM	NM	NM
	3/26/2012	NM	NM	NM	NM
	6/26/2012	NM	NM	NM	NM
	9/24/2012	NM	NM	NM	NM
	12/17/2012	NM	NM	NM	NM
	3/25/2013	NM	NM	NM	NM
	6/17/2013	NM	NM	NM	NM
	9/9/2013	NM	NM	NM	NM
	12/4/2013	NM	NM	NM	NM
	3/3/2014	NM	NM	NM	NM
	6/18/2014	NM	NM	NM	NM
	8/26/2014	NM	NM	NM	NM
	12/8/2014	NM	NM	NM	NM
	3/3/2015	NM	NM	NM	NM
	<b>6/9/2015</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>RW-5</b>	1/22/2008	10.95	NP	-	7.38
(18.33)	3/24/2008	12.45	12.35	0.10	5.96
	6/23/2008	13.60	NM	NM	4.73
	9/22/2008	8.12	NM	NM	10.21
	1/5/2009	12.67	NM	NM	5.66
	3/16/2009	8.35	NM	NM	9.98
	6/15/2009	NM	NM	NM	NM
	9/14/2009	10.35	NM	NM	7.98
	12/21/2009	NM	NM	NM	NM
	3/16/2010	NM	NM	NM	NM
	6/21/2010	NM	NM	NM	NM
	9/20/2010	NM	NM	NM	NM
	12/14/2010	NM	NM	NM	NM
	3/21/2011	NM	NM	NM	NM
	6/9/2011	NM	NM	NM	NM
	9/26/2011	NM	NM	NM	NM
	12/12/2011	NM	NM	NM	NM
	3/26/2012	NM	NM	NM	NM
	6/26/2012	NM	NM	NM	NM
	9/24/2012	NM	NM	NM	NM
	12/17/2012	NM	NM	NM	NM
	3/25/2013	NM	NM	NM	NM
	6/17/2013	NM	NM	NM	NM
	9/9/2013	NM	NM	NM	NM
	12/4/2013	NM	NM	NM	NM
	3/3/2014	NM	NM	NM	NM
	6/18/2014	NM	NM	NM	NM
	8/26/2014	NM	NM	NM	NM
	12/8/2014	NM	NM	NM	NM
	3/3/2015	NM	NM	NM	NM
	<b>6/9/2015</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>RW-6</b>	1/22/2008	10.70	NP	-	7.99
(18.69)	3/24/2008	NM	NM	NM	NM
	6/23/2008	13.52	NM	NM	5.17
	9/22/2008	9.45	NM	NM	9.24
	1/5/2009	12.55	NM	NM	6.14
	3/16/2009	8.20	NM	NM	10.49
	6/15/2009	NM	NM	NM	NM
	9/14/2009	NM	NM	NM	NM
	12/21/2009	NM	NM	NM	NM
	3/16/2010	NM	NM	NM	NM
	6/21/2010	NM	NM	NM	NM
	9/20/2010	NM	NM	NM	NM
	12/14/2010	NM	NM	NM	NM
	3/21/2011	NM	NM	NM	NM
	6/9/2011	NM	NM	NM	NM
	9/26/2011	NM	NM	NM	NM
	12/12/2011	NM	NM	NM	NM
	3/26/2012	NM	NM	NM	NM
	6/26/2012	NM	NM	NM	NM
	9/24/2012	NM	NM	NM	NM
	12/17/2012	NM	NM	NM	NM
	3/25/2013	NM	NM	NM	NM
	6/17/2013	NM	NM	NM	NM
	9/9/2013	NM	NM	NM	NM
	12/4/2013	NM	NM	NM	NM
	3/3/2014	NM	NM	NM	NM
	6/18/2014	NM	NM	NM	NM
	8/26/2014	NM	NM	NM	NM
	12/8/2014	NM	NM	NM	NM
	3/3/2015	NM	NM	NM	NM
	<b>6/9/2015</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>	<b>NM</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>U-2</b>	2/14/2000	15.31	NP	-	19.71
(35.02)	5/22/2000	15.41	NP	-	19.61
	8/22/2000	16.13	NP	-	18.89
	11/27/2000	16.81	NP	-	18.21
	2/20/2001	16.81	NP	-	18.21
	5/15/2001	16.82	NP	-	18.20
	9/18/2001	17.20	NP	-	17.82
	12/20/2001	16.99	NP	-	18.03
	3/13/2002	15.59	NP	-	19.43
	6/24/2002	15.80	NP	-	19.22
	9/26/2002	16.50	NP	-	18.52
	12/20/2002	16.95	NP	-	18.07
	3/17/2003	15.77	NP	-	19.25
	6/26/2003	15.89	NP	-	19.13
	9/24/2003	16.42	NP	-	18.60
	12/30/2003	16.28	NP	-	18.74
	3/29/2004	15.06	NP	-	19.96
	6/29/2004	15.79	NP	-	19.23
	9/27/2004	16.30	NP	-	18.72
	12/14/2004	16.59	NP	-	18.43
	3/7/2005	17.52	NP	-	17.50
	6/20/2005	15.82	NP	-	19.20
	9/19/2005	16.42	NP	-	18.60
	12/12/2005	15.96	NP	-	19.06
	3/13/2006	14.22	NP	-	20.80
	6/26/2006	15.02	NP	-	20.00
	9/25/2006	16.07	NP	-	18.95
	12/11/2006	15.67	NP	-	19.35
	3/19/2007	14.63	NP	-	20.39
(35.02)	6/18/2007	15.33	NP	-	19.69
	9/17/2007	16.18	NP	-	18.84
	12/17/2007	15.88	NP	-	19.14
	1/22/2008	14.94	NP	-	20.08
	3/24/2008	14.75	NP	-	20.27
	6/23/2008	15.10	NP	-	19.92
	9/22/2008	16.30	16.29	0.01	18.72
	1/5/2009	15.68	NP	-	19.34
	3/17/2009	15.46	NP	-	19.56
	6/15/2009	15.24	NP	-	19.78
	9/18/2009	15.98	NP	-	19.04
	12/21/2009	15.77	NP	-	19.25
	3/16/2010	14.81	NP	-	20.21
	6/21/2010	15.50	NP	-	19.52
	9/20/2010	15.51	NP	-	19.51
	12/14/2010	14.96	NP	-	20.06
	3/21/2011	13.50	NP	-	21.52
	6/8/2011	13.79	NP	-	21.23
	9/26/2011	15.46	NP	-	19.56
	12/12/2011	15.50	NP	-	19.52
	3/26/2012	14.07	NP	-	20.95
<b>U-2</b>	6/26/2012	14.29	NP	-	20.73

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
	9/24/2012	15.38	NP	-	19.64
	12/17/2012	14.45	NP	-	20.57
	3/25/2013	14.70	NP	-	20.32
	6/17/2013	14.80	NP	-	20.22
	9/9/2013	15.60	NP	-	19.42
	12/4/2013	15.82	NP	-	19.20
	3/3/2014	15.23	NP	-	19.79
	6/18/2014	14.56	NP	-	20.46
	8/26/2014	15.23	NP	-	19.79
	12/8/2014	15.30	NP	-	19.72
	3/3/2015	14.34	NP	-	20.68
	<b>6/9/2015</b>	<b>14.95</b>	<b>NP</b>	<b>-</b>	<b>20.07</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>U-3</b>	2/14/2000	12.95	NP	-	22.30
(35.25)	5/22/2000	13.55	NP	-	21.70
	8/22/2000	14.19	NP	-	21.06
	11/27/2000	15.68	NP	-	19.57
	2/20/2001	14.38	NP	-	20.87
	5/15/2001	14.26	NP	-	20.99
	9/18/2001	14.89	NP	-	20.36
	12/20/2001	13.22	NP	-	22.03
	3/13/2002	13.01	NP	-	22.24
	6/24/2002	13.57	NP	-	21.68
	9/26/2002	14.39	NP	-	20.86
	12/20/2002	14.23	NP	-	21.02
	3/17/2003	13.97	NP	-	21.28
	6/26/2003	13.56	NP	-	21.69
	9/24/2003	14.54	NP	-	20.71
	12/30/2003	13.41	NP	-	21.84
	3/29/2004	12.83	NP	-	22.42
	6/29/2004	14.75	NP	-	20.50
	9/27/2004	14.21	NP	-	21.04
	12/14/2004	13.98	NP	-	21.27
	3/7/2005	14.02	NP	-	21.23
	6/20/2005	13.68	NP	-	21.57
	9/19/2005	14.49	NP	-	20.76
	12/12/2005	13.43	NP	-	21.82
	3/13/2006	12.58	NP	-	22.67
	6/26/2006	14.27	NP	-	20.98
	9/25/2006	15.24	NP	-	20.01
	12/11/2006	15.08	NP	-	20.17
	3/19/2007	13.54	NP	-	21.71
	6/18/2007	13.60	NP	-	21.65
	9/17/2007	-	-	-	-
	12/17/2007	13.07	NP	-	22.18
	3/24/2008	12.54	NP	-	22.71
	6/23/2008	13.22	NP	-	22.03
	9/22/2008	13.97	NP	-	21.28
	1/5/2009	12.63	NP	-	22.62
	3/17/2009	12.97	NP	-	22.28
	6/15/2009	12.99	NP	-	22.26
	9/18/2009	13.97	NP	-	21.28
	12/21/2009	13.08	NP	-	22.17
	3/16/2010	12.55	NP	-	22.70
	6/21/2010	12.33	NP	-	22.92
	9/20/2010	13.52	NP	-	21.73
	12/14/2010	12.24	NP	-	23.01
	3/21/2011	11.37	NP	-	23.88
	6/8/2011	12.30	NP	-	22.95
	9/26/2011	13.88	NP	-	21.37
	12/12/2011	13.27	NP	-	21.98
	3/26/2012	NM	NP	-	NM

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>U-3</b>	6/26/2012	12.15	NP	-	23.10
	9/24/2012	13.48	NP	-	21.77
	12/17/2012	12.31	NP	-	22.94
	3/25/2013	12.71	NP	-	22.54
	6/17/2013	12.57	NP	-	22.68
	9/9/2013	15.38	NP	-	19.87
	12/4/2013	13.68	NP	-	21.57
	3/3/2014	12.36	NP	-	22.89
	6/18/2014	12.50	NP	-	22.75
	8/26/2014	13.23	NP	-	22.02
	12/8/2014	12.97	NP	-	22.28
	3/3/2015	12.43	NP	-	22.82
	<b>6/9/2015</b>	<b>12.93</b>	<b>NP</b>	-	<b>22.32</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>U-4</b>	2/14/2000	15.86	15.77	0.09	18.67
(34.46)	5/22/2000	16.03	NP	-	18.43
	8/22/2000	16.38	NP	-	18.08
	11/27/2000	16.83	NP	-	17.63
	2/20/2001	16.85	16.85	sheen	17.61
	5/15/2001	16.61	16.57	0.04	17.88
	9/18/2001	19.96	19.96	sheen	14.50
	12/20/2001	16.37	16.30	0.07	18.15
	3/13/2002	15.60	NP	-	18.86
	6/24/2002	15.50	NP	-	18.96
	9/26/2002	17.64	NP	-	16.82
	12/20/2002	16.77	NP	-	17.69
	3/17/2003	16.05	15.80	0.25	18.61
	6/26/2003	16.10	15.98	0.12	18.46
	9/24/2003	16.68	16.61	0.07	17.84
	12/30/2003	16.28	NP	-	18.18
	3/29/2004	15.45	15.43	0.02	19.03
	6/29/2004	16.14	NP	-	18.32
	9/27/2004	16.55	NP	-	17.91
	12/14/2004	16.50	NP	-	17.96
	3/7/2005	16.35	NP	-	18.11
	6/20/2005	15.90	NP	-	18.56
	9/19/2005	16.48	16.45	0.03	18.00
	12/12/2005	16.15	NP	-	18.31
	3/13/2006	14.25	14.25	sheen	20.21
	6/26/2006	15.50	15.50	sheen	18.96
	9/25/2006	16.21	16.21	sheen	18.25
	12/11/2006	15.76	15.75	0.01	18.71
	3/19/2007	14.56	NP	-	19.90
(34.06)	6/18/2007	15.87	NP	-	18.19
	9/17/2007	16.42	16.42	sheen	17.64
	12/17/2007	15.22	NP	-	18.84
	1/22/2008	14.27	NP	-	19.79
	3/24/2008	14.60	14.55	0.05	19.50
	6/23/2008	15.82	15.74	0.08	18.30
	9/22/2008	16.40	NP	-	17.66
	1/5/2009	15.56	NP	-	18.50
	3/17/2009	15.75	NP	-	18.31
	6/15/2009	15.80	15.75	0.05	18.30
	9/18/2009	16.27	16.25	0.02	17.81
	12/21/2009	15.98	NP	-	18.08
	3/16/2010	14.69	14.63	0.06	19.42
	6/21/2010	14.56	14.46	0.10	19.58
	9/20/2010	16.19	15.98	0.21	18.04
	12/14/2010	14.44	14.39	0.05	19.66
	3/21/2011	13.44	13.39	0.05	20.66
	6/8/2011	14.14	14.11	0.03	19.94
	9/26/2011	15.79	15.70	0.09	18.34
	12/12/2011	15.60	15.54	0.06	18.51

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>U-4</b>	3/26/2012	13.97	13.92	0.05	20.13
	6/26/2012	14.34	NP	-	19.72
	9/24/2012	15.81	15.67	0.14	18.36
	12/17/2012	14.34	14.33	0.01	19.73
	3/25/2013	14.69	14.68	0.01	19.38
	6/17/2013	14.82	14.78	0.04	19.27
	9/9/2013	15.65	15.62	0.03	18.43
	12/4/2013	NM	NM	NM	NM
	3/3/2014	15.14	14.96	0.18	19.06
	6/18/2014	14.62	NP	-	19.44
	8/26/2014	15.49	15.46	0.03	18.59
	12/8/2014	14.66	NP	-	19.40
	3/3/2015	14.62	NP	-	19.44
	<b>6/9/2015</b>	<b>15.43</b>	<b>NP</b>	<b>-</b>	<b>18.63</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>U-5</b>	2/14/2000	17.85	NP	-	16.28
(34.13)	5/22/2000	18.03	NP	-	16.10
	8/22/2000	19.02	NP	-	15.11
	11/27/2000	19.03	NP	-	15.10
	2/20/2001	19.44	NP	-	14.69
	5/15/2001	19.57	19.22	0.35	14.84
	9/18/2001	20.04	20.02	0.02	14.11
	12/20/2001		-----Unable to Locate-----		
	3/13/2002		----Inaccessible - Covered by Sand---		
	6/24/2002		----Inaccessible - Covered by Sand---		
	9/26/2002	19.63	19.41	0.22	14.68
	12/20/2002	19.49	NP	-	14.64
	3/17/2003	17.99	NP	-	16.14
	6/26/2003	19.17	NP	-	14.96
	9/24/2003	19.42	NP	-	14.71
	12/30/2003	18.80	NP	-	15.33
	3/29/2004	18.39	NP	-	15.74
	6/29/2004	19.00	NP	-	15.13
	9/27/2004	19.14	19.14	sheen	14.99
	12/14/2004	18.55	NP	-	15.58
	3/7/2005	19.23	NP	-	14.90
	6/20/2005	18.95	NP	-	15.18
	9/19/2005	18.93	NP	-	15.20
	12/12/2005	18.09	NP	-	16.04
	3/13/2006	17.06	NP	-	17.07
	6/26/2006		---Unable to locate well; under sand---		
	9/25/2006	18.86	18.80	0.06	15.27
	12/11/2006	NM	NM	NM	NM
	3/19/2007	18.00	NP	-	16.13
	6/18/2007	18.52	NP	-	15.58
(34.10)	9/17/2007	19.60	NP	-	14.50
	12/17/2007		---Unable to locate well; under sand---		
	1/22/2008	18.15	NP	-	15.95
	3/24/2008	17.39	17.39	sheen	16.71
	6/23/2008	18.73	NP	-	15.37
	9/22/2008	18.99	NP	-	15.11
	1/5/2009	17.88	NP	-	16.22
	3/16/2009	18.25	NP	-	15.85
	6/15/2009	18.91	NP	-	15.19
	9/18/2009	18.76	NP	-	15.34
	12/21/2009	17.87	NP	-	16.23
	3/16/2010	17.32	NP	-	16.78
	6/21/2010	16.68	NP	-	17.42
	9/20/2010	NM	NM	NM	NM
	12/14/2010	16.73	NP	-	17.37
	3/21/2011	16.74	NP	-	17.36
	6/9/2011	15.04	NP	-	19.06
	9/26/2011	16.93	NP	-	17.17
	12/12/2011	16.60	NP	-	17.50

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>U-5</b>	3/26/2012	16.54	NP	-	17.56
	6/26/2012	16.96	NP	-	17.14
	9/24/2012	NM	NM	NM	NM
	12/17/2012	16.33	NP	-	17.77
	3/25/2013	17.80	NP	-	16.30
	6/17/2013	17.48	NP	-	16.62
	9/9/2013	18.86	NP	-	15.24
	12/4/2013	19.01	NP	-	15.09
	3/3/2014	18.54	NP	-	15.56
	6/18/2014	17.65	NP	-	16.45
	8/26/2014	17.71	NP	-	16.39
	12/8/2014	17.55	NP	-	16.55
	3/3/2015	16.79	NP	-	17.31
	<b>6/9/2015</b>	<b>16.70</b>	<b>NP</b>	-	<b>17.40</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>U-5A</b>	2/14/2000	6.46	NP	-	27.31
(33.77)	5/22/2000	7.00	6.99	0.01	26.78
	8/22/2000	8.58	8.57	0.01	25.20
	11/27/2000	9.71	NP	-	24.06
	2/20/2001	9.04	NP	-	24.73
	5/15/2001	8.99	8.99	sheen	24.78
	9/18/2001	10.29	10.29	sheen	23.48
	12/20/2001	7.81	NP	-	25.96
	3/13/2002	6.51	NP	-	27.26
	6/24/2002	7.60	NP	-	26.17
	9/26/2002	9.31	NP	-	24.46
	12/20/2002	9.43	NP	-	24.34
	3/17/2003	7.03	NP	-	26.74
	6/26/2003	7.41	NP	-	26.36
	9/24/2003	9.16	NP	-	24.61
	12/30/2003	7.79	NP	-	25.98
	3/29/2004	6.49	NP	-	27.28
	6/29/2004	7.76	7.75	0.01	26.02
	9/27/2004	9.03	8.98	0.05	24.78
	12/14/2004	8.60	NP	-	25.17
	3/7/2005	8.22	8.22	sheen	25.55
	6/20/2005	7.41	7.41	sheen	26.36
	9/19/2005	19.14	NP	-	14.63
	12/12/2005	7.91	7.91	sheen	25.86
	3/13/2006	5.32	NP	-	28.45
	6/26/2006	6.83	NP	-	26.94
	9/25/2006	**	8.68	**	NM
	12/11/2006	7.31	7.30	0.01	26.47
	3/19/2007	5.98	5.96	0.02	27.81
	6/18/2007	NM	7.30	**	NM
	9/17/2007	9.03	NP	-	24.74
	12/17/2007	7.85	NP	-	25.92
	3/24/2008	6.04	5.94	0.10	27.81
	6/23/2008	7.12	7.12	sheen	26.65
	9/22/2008	8.85	8.70	0.15	25.04
	1/5/2009	7.03	NP	-	26.74
	3/17/2009	6.89	NP	-	26.88
	6/15/2009	NM	NM	NM	NM
	9/18/2009	NM	NM	0.13	NM
	12/21/2009	7.82	NP	-	25.95
	3/16/2010	6.05	NP	-	27.72
	6/21/2010	6.03	5.99	0.04	27.77
	9/20/2010	7.62	7.00	0.62	26.65
	12/14/2010	6.85	6.25	0.60	27.40
	3/21/2011	5.05	4.64	0.41	29.05
	6/8/2011	5.82	5.70	0.12	28.05
	9/26/2011	8.20	7.96	0.24	25.76
	12/12/2011	7.37	7.00	0.37	26.70
	3/26/2012	5.35	5.31	0.04	28.45

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>U-5A</b>	6/26/2012	NM	6.01	NM	NM
	9/24/2012	7.80	7.72	0.08	26.03
	12/17/2012	6.26	6.04	0.22	27.69
	3/25/2013	6.44	6.37	0.07	27.39
	6/17/2013	6.82	6.72	0.10	27.03
	9/9/2013	18.01	17.91	0.10	15.84
	12/4/2013	8.01	7.95	0.06	25.81
	3/3/2014	NM	NP	NM	NM
	6/18/2014	6.74	6.45	0.29	27.26
	8/26/2014	7.71	7.51	0.20	26.22
	12/8/2014	6.93	NP	-	26.84
	3/3/2015	6.14	5.98	0.16	27.76
	<b>6/9/2015</b>	<b>7.23</b>	<b>7.02</b>	<b>0.21</b>	<b>26.71</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>U-10</b>	6/26/2003	4.76	NP	-	NM
	9/24/2003	5.00	NP	-	NM
	12/30/2003	3.65	NP	-	NM
	3/29/2004	4.45	NP	-	NM
	9/27/2004	5.03	NP	-	NM
	12/14/2004	4.10	NP	-	NM
	3/7/2005	5.12	NP	-	NM
	6/20/2005	4.94	NP	-	NM
	9/19/2005	5.26	NP	-	NM
	12/12/2005	4.11	4.11	sheen	NM
	3/13/2006	3.45	NP	-	NM
	6/26/2006	3.96	NP	-	NM
Well Abandoned					
<b>U-11</b>	6/26/2003	3.30	NP	-	NM
	9/24/2003	3.29	NP	-	NM
	12/30/2003	2.51	NP	-	NM
	3/29/2004	2.94	NP	-	NM
	9/27/2004	3.91	NP	-	NM
	12/14/2004	2.35	NP	-	NM
	3/7/2005	3.43	NP	-	NM
	6/20/2005	3.95	NP	-	NM
	9/19/2005	4.11	NP	-	NM
	12/12/2005	3.09	NP	-	NM
	3/13/2006	2.40	NP	-	NM
	6/26/2006	2.38	NP	-	NM
Well Abandoned					
<b>U-12</b>	6/26/2003	3.08	NP	-	NM
	9/24/2003	3.17	NP	-	NM
	12/30/2003	2.98	NP	-	NM
	3/29/2004	2.97	NP	-	NM
	9/27/2004	4.14	NP	-	NM
	12/14/2004	3.18	NP	-	NM
	3/7/2005	3.72	NP	-	NM
	6/20/2005	3.66	NP	-	NM
	9/19/2005	4.14	NP	-	NM
	12/12/2005	3.44	NP	-	NM
	3/13/2006	2.51	NP	-	NM
	6/26/2006	2.82	NP	-	NM
Well Abandoned					

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>U-13</b>	12/14/2004	15.93	NP	-	
(35.77)	3/7/2005	14.51	14.45	0.01	NM
	6/20/2005	14.71	14.47	0.24	NM
	9/19/2005	16.30	15.72	0.58	NM
	12/12/2005	15.28	14.93	0.35	NM
	3/13/2006	12.79	12.45	0.34	NM
	6/26/2006	13.92	13.64	0.28	NM
	9/25/2006	15.52	15.35	0.17	20.39
	12/11/2006	13.98	NP	-	21.79
	3/19/2007	13.27	13.10	0.17	22.64
	6/18/2007	14.48	14.17	0.31	21.54
	9/17/2007	15.67	15.64	0.03	20.12
	12/17/2007	14.73	14.62	0.11	21.13
	3/24/2008	13.30	13.25	0.05	22.51
	6/23/2008	14.11	13.94	0.17	21.80
	9/22/2008	15.47	15.35	0.12	20.40
	1/5/2009	14.79	14.51	0.28	21.20
	3/17/2009	14.40	14.16	0.24	21.56
	6/15/2009	14.18	13.95	0.23	21.77
	9/18/2009	15.35	15.20	0.15	20.54
	12/21/2009	15.02	14.63	0.39	21.06
	3/16/2010	13.84	13.12	0.72	22.51
	6/21/2010	13.52	12.76	0.76	22.86
	9/20/2010	15.08	14.45	0.63	21.19
	12/14/2010	13.98	13.25	0.73	22.37
	3/21/2011	11.65	11.40	0.25	24.32
	6/8/2011	12.44	12.15	0.29	23.56
	9/26/2011	14.28	14.05	0.23	21.67
	12/12/2011	14.27	13.96	0.31	21.75
	3/26/2012	12.08	NP	-	23.69
	6/26/2012	12.52	NP	-	23.25
	9/24/2012	14.03	NP	-	21.74
	12/17/2012	12.34	NP	-	23.43
	3/25/2013	12.94	NP	-	22.83
	6/17/2013	13.07	NP	-	22.70
	9/9/2013	14.22	NP	-	21.55
	12/4/2013	14.29	NP	-	21.48
	3/3/2014	13.09	NP	-	22.68
	6/18/2014	13.02	NP	-	22.75
	8/26/2014	13.92	NP	-	21.85
	12/8/2014	13.65	NP	-	22.12
	3/3/2015	12.66	NP	-	23.11
	<b>6/9/2015</b>	<b>13.52</b>	<b>NP</b>	<b>-</b>	<b>22.25</b>
	<b>8/19/2015</b>	<b>14.52</b>	<b>NP</b>	<b>-</b>	<b>21.25</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>U-14</b>	8/18/2006	14.65	NP	-	NM
(37.21)	9/25/2006	15.22	NP	-	21.99
	12/11/2006	13.21	NP	-	24.00
	3/19/2007	12.66	NP	-	24.55
	6/18/2007	14.33	NP	-	22.88
	9/17/2007	15.24	NP	-	21.97
	12/17/2007	13.01	NP	-	24.20
	3/24/2008	12.77	NP	-	24.44
	6/23/2008	14.04	NP	-	23.17
	9/22/2008	15.02	NP	-	22.19
	1/5/2009	12.14	NP	-	25.07
	3/17/2009	14.10	NP	-	23.11
	6/15/2009	13.82	NP	-	23.39
	9/18/2009	14.72	NP	-	22.49
	12/21/2009	---Inaccessible Due to Construction---			
	3/16/2010	12.65	NP	-	24.56
	6/21/2010	12.44	NP	-	24.77
	9/20/2010	14.34	NP	-	22.87
	12/14/2010	12.10	NP	-	25.11
	3/21/2011	11.34	NP	-	25.87
	6/8/2011	12.28	NP	-	24.93
	9/26/2011	14.46	NP	-	22.75
	12/12/2011	13.64	NP	-	23.57
	3/26/2012	12.85	NP	-	24.36
	6/26/2012	12.61	NP	-	24.60
	9/24/2012	14.32	NP	-	22.89
	12/17/2012	NM	NM	NM	NM
	3/25/2013	13.06	NP	-	24.15
	6/17/2013	13.08	NP	-	24.13
	9/9/2013	14.30	NP	-	22.91
	12/4/2013	14.12	NP	-	23.09
	3/3/2014	12.94	NP	-	24.27
	6/18/2014	13.15	NP	-	24.06
	8/26/2014	14.10	NP	-	23.11
	12/8/2014	13.14	NP	-	24.07
	3/3/2015	12.78	NP	-	24.43
	<b>6/9/2015</b>	<b>13.72</b>	<b>NP</b>	<b>-</b>	<b>23.49</b>
	<b>8/19/2015</b>	<b>14.41</b>	<b>NP</b>	<b>-</b>	<b>22.80</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>U-15</b>	8/18/2006	14.18	NP	-	NM
(35.57)	9/25/2006	14.95	NP	-	20.62
	12/11/2006	NM	NM	NM	NM
	3/19/2007	12.90	NP	-	22.67
	6/18/2007	13.87	NP	-	21.70
	9/17/2007	14.81	NP	-	20.76
	12/17/2007	13.80	NP	-	21.77
	3/24/2008	12.88	NP	-	22.69
	6/23/2008	13.42	13.41	0.01	22.14
	9/22/2008	14.50	NP	-	21.07
	1/5/2009	13.35	NP	-	22.22
	3/17/2009	13.65	13.65	sheen	21.92
	6/15/2009	13.27	NP	-	22.30
	9/18/2009	14.27	NP	-	21.30
	12/21/2009	13.59	NP	-	21.98
	3/16/2010	12.80	NP	-	22.77
	6/21/2010	12.60	12.58	0.02	22.97
	9/20/2010	13.98	NP	-	21.59
	12/14/2010	12.82	NP	-	22.75
	3/21/2011	11.55	NP	-	24.02
	6/8/2011	12.18	NP	-	23.39
	9/26/2011	13.85	NP	-	21.72
	12/12/2011	13.53	NP	-	22.04
	3/26/2012	11.99	NP	-	23.58
	6/26/2012	12.50	NP	-	23.07
	9/24/2012	13.73	NP	-	21.84
	12/17/2012	12.47	NP	-	23.10
	3/25/2013	13.00	NP	-	22.57
	6/17/2013	12.57	NP	-	23.00
	9/9/2013	13.81	NP	-	21.76
	12/4/2013	13.85	NP	-	21.72
	3/3/2014	13.21	NP	-	22.36
	6/18/2014	13.07	NP	-	22.50
	8/26/2014	13.59	NP	-	21.98
	12/8/2014	13.17	NP	-	22.40
	3/3/2015	12.57	NP	-	23.00
	<b>6/9/2015</b>	<b>13.26</b>	<b>NP</b>	-	<b>22.31</b>
	<b>8/19/2015</b>	<b>14.02</b>	<b>NP</b>	-	<b>21.55</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>U-16</b>	8/18/2006	13.46	NP	-	NM
(36.08)	9/25/2006	14.35	NP	-	21.73
	12/11/2006	13.32	NP	-	22.76
	3/19/2007	12.19	NP	-	23.89
	6/18/2007	13.26	NP	-	22.82
	9/17/2007	14.55	NP	-	21.53
	12/17/2007	13.19	NP	-	22.89
	3/24/2008	12.22	NP	-	23.86
	6/23/2008	13.94	NP	-	22.14
	9/22/2008	13.83	NP	-	22.25
	1/5/2009	12.82	NP	-	23.26
	3/17/2009	13.10	NP	-	22.98
	6/15/2009	12.78	NP	-	23.30
	9/18/2009	13.85	NP	-	22.23
	12/21/2009	13.24	NP	-	22.84
	3/16/2010	11.83	NP	-	24.25
	6/21/2010	11.67	11.65	0.02	24.41
	9/20/2010	13.52	NP	-	22.56
	12/14/2010	12.17	NP	-	23.91
	3/21/2011	10.83	NP	-	25.25
	6/8/2011	11.63	NP	-	24.45
	9/26/2011	13.40	NP	-	22.68
	12/12/2011	13.19	NP	-	22.89
	3/26/2012	11.11	NP	-	24.97
	6/26/2012	11.88	NP	-	24.20
(36.08)	9/24/2012	13.24	NP	-	22.84
	12/17/2012	11.85	NP	-	24.23
	3/25/2013	12.27	NP	-	23.81
	6/17/2013	12.33	NP	-	23.75
	9/9/2013	13.40	NP	-	22.68
	12/4/2013	13.52	NP	-	22.56
	3/3/2014	12.76	NP	-	23.32
	6/18/2014	12.36	NP	-	23.72
	8/26/2014	13.15	NP	-	22.93
	12/8/2014	12.72	NP	-	23.36
	3/3/2015	12.05	NP	-	24.03
	<b>6/9/2015</b>	<b>12.74</b>	<b>NP</b>	-	<b>23.34</b>
	<b>8/19/2015</b>	<b>13.62</b>	<b>NP</b>	-	<b>22.46</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>U-17</b>	8/18/2006	14.21	NP	-	NM
(35.77)	9/25/2006	14.86	NP	-	20.91
	12/11/2006	14.19	NP	-	21.58
	3/19/2007	12.72	NP	-	23.05
	6/18/2007	13.76	NP	-	22.01
	9/17/2007	15.07	NP	-	20.70
	12/17/2007	14.65	NP	-	21.12
	3/24/2008	12.91	NP	-	22.86
	6/23/2008	13.54	NP	-	22.23
	9/22/2008	14.83	NP	-	20.94
	1/5/2009	14.50	NP	-	21.27
	3/17/2009	13.77	NP	-	22.00
	6/15/2009	13.61	13.60	0.01	22.15
	9/18/2009	14.74	NP	-	21.03
	12/21/2009	14.49	NP	-	21.28
	3/16/2010	12.98	NP	-	22.79
	6/21/2010	12.63	12.61	0.02	23.14
	9/20/2010	14.11	NP	-	21.66
	12/14/2010	13.35	NP	-	22.42
	3/21/2011	11.35	NP	-	24.42
	6/8/2011	11.93	NP	-	23.84
	9/26/2011	13.92	NP	-	21.85
	12/12/2011	14.12	NP	-	21.65
	3/26/2012	12.11	NP	-	23.66
	6/26/2012	12.38	NP	-	23.39
	9/24/2012	13.93	NP	-	21.84
	12/17/2012	12.60	NP	-	23.17
	3/25/2013	12.90	NP	-	22.87
	6/17/2013	13.05	NP	-	22.72
	9/9/2013	14.14	NP	-	21.63
	12/4/2013	14.48	NP	-	21.29
	3/3/2014	13.75	NP	-	22.02
	6/18/2014	12.80	NP	-	22.97
	8/26/2014	13.75	NP	-	22.02
	12/8/2014	13.83	NP	-	22.25
	3/3/2015	12.44	NP	-	23.64
	<b>6/9/2015</b>	<b>13.34</b>	<b>NP</b>	-	<b>22.74</b>
	<b>8/19/2015</b>	<b>14.41</b>	<b>NP</b>	-	<b>21.67</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>U-18</b>	3/19/2007	8.08	NP	-	26.75
(34.83)	6/18/2007	9.16	NP	-	25.67
	9/17/2007	10.89	NP	-	23.94
	12/17/2007	9.50	NP	-	25.33
	3/24/2008	7.99	NP	-	26.84
	6/23/2008	8.96	NP	-	25.87
	9/22/2008	10.54	NP	-	24.29
	1/5/2009	8.54	NP	-	26.29
	3/17/2009	8.70	NP	-	26.13
	6/15/2009	8.95	NP	-	25.88
	9/18/2009	10.40	NP	-	24.43
	12/21/2009	9.52	NP	-	25.31
	3/16/2010	7.96	NP	-	26.87
	6/21/2010	7.99	7.99	sheen	26.84
	9/20/2010	9.44	NP	-	25.39
	12/14/2010	7.96	NP	-	26.87
	3/21/2011	6.66	NP	-	28.17
	6/8/2011	7.67	NP	-	27.16
	9/26/2011	9.53	NP	-	25.30
	12/12/2011	9.09	NP	-	25.74
	3/26/2012	7.35	NP	-	27.48
	6/26/2012	7.90	NP	-	26.93
	9/24/2012	9.52	NP	-	25.31
	12/17/2012	7.76	NP	-	27.07
	3/25/2013	8.25	NP	-	26.58
	6/17/2013	8.48	NP	-	26.35
	9/9/2013	9.66	NP	-	25.17
	12/4/2013	9.68	NP	-	25.15
	3/3/2014	NM	NM	NM	NM
	6/18/2014	8.27	NP	-	26.56
	8/26/2014	9.27	NP	-	25.56
	12/8/2014	8.63	NP	-	26.20
	3/3/2015	7.92	NP	-	26.91
	6/9/2015	8.71	NP	-	26.12
	8/19/2015	9.95	NP	-	24.88

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>U-19</b>	3/19/2007	14.89	NP	-	19.33
(34.22)	6/18/2007	15.14	NP	-	19.08
	9/17/2007	15.29	NP	-	18.93
	12/17/2007	14.57	NP	-	19.65
	3/24/2008	13.64	NP	-	20.58
	6/23/2008	14.69	NP	-	19.53
	9/22/2008	15.20	NP	-	19.02
	1/5/2009	13.31	NP	-	20.91
	3/16/2009	NM	NM	NM	NM
	6/15/2009	13.94	NP	-	20.28
	9/18/2009	NM	NM	NM	NM
	12/21/2009	NM	NM	NM	NM
	3/16/2010	NM	NM	NM	NM
	6/21/2010	NM	NM	NM	NM
	9/20/2010	NM	NM	NM	NM
	12/14/2010	NM	NM	NM	NM
	3/21/2011	NM	NM	NM	NM
	6/8/2011	NM	NM	NM	NM
	9/26/2011	NM	NM	NM	NM
(34.22)	12/12/2011	-	-	-	-
	3/26/2012	12.52	NP	-	21.70
	6/26/2012	13.40	NP	-	20.82
	9/24/2012	14.81	NP	-	19.41
	12/17/2012	13.25	NP	-	20.97
	3/25/2013	13.76	NP	-	20.46
	6/17/2013	13.72	NP	-	20.50
	9/9/2013	14.83	NP	-	19.39
	12/4/2013	14.90	NP	-	19.32
	3/3/2014	13.71	NP	-	20.51
	6/18/2014	14.15	NP	-	19.32
	8/26/2014	14.80	NP	-	20.51
	12/8/2014	14.25	NP	-	19.32
	3/3/2015	13.69	NP	-	20.51
	<b>6/9/2015</b>	<b>14.54</b>	<b>NP</b>	-	<b>19.68</b>
	<b>8/19/2015</b>	<b>15.03</b>	<b>NP</b>	-	<b>19.19</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>U-20</b>	3/19/2007	13.50	NP	-	21.89
(35.39)	6/18/2007	14.50	NP	-	20.89
	9/17/2007	15.29	NP	-	20.10
	12/17/2007	14.22	NP	-	21.17
	3/24/2008	13.50	NP	-	21.89
	6/23/2008	14.39	NP	-	21.00
	9/22/2008	15.22	NP	-	20.17
	1/5/2009	13.66	NP	-	21.73
	3/17/2009	14.34	NP	-	21.05
	6/15/2009	14.35	NP	-	21.04
	9/18/2009	15.28	NP	-	20.11
	12/21/2009	14.27	NP	-	21.12
	3/16/2010	13.60	NP	-	21.79
	6/21/2010	13.50	NP	-	21.89
	9/20/2010	13.66	NP	-	21.73
	12/14/2010	13.29	NP	-	22.10
	3/21/2011	12.31	NP	-	23.08
	6/8/2011	13.24	NP	-	22.15
	9/26/2011	14.79	NP	-	20.60
	12/12/2011	14.33	NP	-	21.06
	3/26/2012	12.91	NP	-	22.48
	6/26/2012	13.43	NP	-	21.96
	9/24/2012	14.76	NP	-	20.63
	12/17/2012	13.25	NP	-	22.14
	3/25/2013	13.88	NP	-	21.51
	6/17/2013	13.97	NP	-	21.42
	9/9/2013	14.80	NP	-	20.59
	12/4/2013	14.68	NP	-	20.71
	3/3/2014	13.89	NP	-	21.50
	6/18/2014	13.80	NP	-	21.59
	8/26/2014	14.61	NP	-	20.78
	12/8/2014	13.83	NP	-	21.56
	3/3/2015	13.68	NP	-	21.71
	<b>6/9/2015</b>	<b>14.42</b>	<b>NP</b>	-	<b>20.97</b>
	<b>8/19/2015</b>	<b>15.05</b>	<b>NP</b>	-	<b>20.34</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>U-21</b>	3/19/2007	13.71	NP	-	22.03
(35.74)	6/18/2007	14.71	NP	-	21.03
	9/17/2007	15.50	NP	-	20.24
	12/17/2007	14.38	NP	-	21.36
	3/24/2008	13.66	NP	-	22.08
	6/23/2008	14.56	NP	-	21.18
	9/22/2008	15.41	NP	-	20.33
	1/5/2009	13.84	NP	-	21.90
	3/17/2009	14.50	NP	-	21.24
	6/15/2009	14.50	NP	-	21.24
	9/18/2009	15.10	NP	-	20.64
	12/21/2009	14.42	NP	-	21.32
	3/16/2010	13.80	NP	-	21.94
	6/21/2010	12.27	NP	-	23.47
	9/20/2010	14.70	NP	-	21.04
	12/14/2010	13.46	NP	-	22.28
	3/21/2011	12.43	NP	-	23.31
	6/8/2011	13.35	NP	-	22.39
	9/26/2011	14.93	NP	-	20.81
	12/12/2011	14.50	NP	-	21.24
	3/26/2012	13.08	NP	-	22.66
	6/26/2012	13.58	NP	-	22.16
	9/24/2012	14.84	NP	-	20.90
	12/17/2012	13.40	NP	-	22.34
	3/25/2013	14.03	NP	-	21.71
	6/17/2013	14.12	NP	-	21.62
	9/9/2013	NM	NM	NM	NM
	12/4/2013	14.81	NP	-	20.93
	3/3/2014	14.04	NP	-	21.70
	6/18/2014	13.94	NP	-	21.80
	8/26/2014	14.75	NP	-	20.99
	12/8/2014	14.02	NP	-	21.72
	3/3/2015	13.81	NP	-	21.93
	<b>6/9/2015</b>	<b>14.58</b>	NP	-	<b>21.16</b>
	<b>8/19/2015</b>	<b>15.14</b>	NP	-	<b>20.60</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>U-22A</b>	12/17/2007	9.43	NP	-	7.87
(17.30)	1/22/2008	8.74	NP	-	8.56
	3/24/2008	8.85	NP	-	8.45
	6/23/2008	4.85	NP	-	12.45
	9/22/2008	10.15	NP	-	7.15
	1/5/2009	5.48	NP	-	11.82
	3/16/2009	9.02	NP	-	8.28
	6/15/2009	7.67	NP	-	9.63
	9/14/2009	10.12	NP	-	7.18
	12/21/2009	8.59	NP	-	8.71
	3/16/2010	9.34	NP	-	7.96
	6/21/2010	4.98	NP	-	12.32
	9/20/2010	9.73	NP	-	7.57
	12/14/2010	5.58	NP	-	11.72
	3/21/2011	4.94	NP	-	12.36
	6/9/2011	NM	NM	NM	NM
	9/26/2011	9.89	NP	-	7.41
	12/12/2011	9.50	NP	-	7.80
	3/26/2012	3.77	NP	-	13.53
	6/26/2012			Inaccessible	
(17.30)	9/24/2012	9.81	NP	-	7.49
	12/17/2012	4.86	NP	-	12.44
	3/25/2013	9.41	NP	-	7.89
	6/17/2013	8.60	NP	-	8.70
	9/9/2013	9.66	NP	-	7.64
	12/4/2013	8.62	NP	-	8.68
	3/3/2014	7.17	NP	-	10.13
	6/18/2014	7.85	NP	-	9.45
	8/26/2014	9.69	NP	-	7.61
	12/8/2014	7.33	NP	-	9.97
	3/3/2015	8.73	NP	-	8.57
	<b>6/9/2015</b>	<b>9.11</b>	<b>NP</b>	-	<b>8.19</b>
	<b>8/19/2015</b>	<b>9.58</b>	<b>NP</b>	-	<b>7.72</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>U-22B</b>	12/17/2007	6.22	NP	-	10.69
(16.91)	1/22/2008	5.61	NP	-	11.30
	3/24/2008	6.02	NP	-	10.89
	6/23/2008	19.22	NP	-	-2.31
	9/22/2008	11.98	NP	-	4.93
	1/5/2009	11.90	NP	-	5.01
	3/16/2009	8.84	NP	-	8.07
	6/15/2009	9.10	NP	-	7.81
	9/14/2009	8.58	NP	-	8.33
	12/21/2009	16.37	NP	-	0.54
	3/16/2010	11.11	NP	-	5.80
	6/21/2010	10.99	NP	-	5.92
	9/20/2010	10.41	NP	-	6.50
	12/14/2010	4.13	NP	-	12.78
	3/21/2011	2.76	2.75	0.01	14.15
	6/9/2011	NM	NM	NM	NM
	9/26/2011	7.19	NP	-	9.72
	12/12/2011	6.72	NP	-	10.19
	3/26/2012	2.32	NP	-	14.59
	6/26/2012			Inaccessible	
	9/24/2012	7.25	NP	-	9.66
	12/17/2012	3.06	NP	-	13.85
	3/25/2013	4.46	NP	-	12.45
	6/17/2013	5.00	NP	-	11.91
	9/9/2013	5.69	NP	-	11.22
	12/4/2013	8.66	NP	-	8.25
	3/3/2014	5.42	NP	-	11.49
	6/18/2014	7.85	NP	-	9.06
	8/26/2014	8.03	NP	-	8.88
	12/8/2014	5.05	NP	-	11.86
	3/3/2015	4.74	NP	-	12.17
	<b>6/9/2015</b>	<b>7.72</b>	<b>NP</b>	-	<b>9.19</b>
	<b>8/19/2015</b>	<b>6.74</b>	<b>NP</b>	-	<b>10.17</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>U-23</b>	12/17/2007	5.70	NP	-	13.60
(19.30)	1/22/2008	4.96	NP	-	14.34
	3/24/2008	4.98	NP	-	14.32
	6/23/2008	5.61	NP	-	13.69
	9/22/2008	6.55	NP	-	12.75
	1/5/2009	4.37	NP	-	14.93
	3/16/2009	4.99	NP	-	14.31
	6/15/2009	5.59	NP	-	13.71
	9/14/2009	5.49	NP	-	13.81
	12/21/2009	4.61	NP	-	14.69
	3/16/2010	4.63	NP	-	14.67
	6/21/2010	2.92	NP	-	16.38
	9/20/2010	5.80	NP	-	13.50
	12/14/2010	2.10	NP	-	17.20
	3/21/2011	3.86	NP	-	15.44
	6/9/2011	NM	NM	NM	NM
	9/26/2011	5.94	NP	-	13.36
	12/12/2011	4.32	NP	-	14.98
	3/26/2012	2.83	NP	-	16.47
	6/26/2012	4.34	NP	-	14.96
	9/24/2012	5.95	NP	-	13.35
	12/17/2012	1.88	NP	-	17.42
	3/25/2013	4.66	NP	-	14.64
	6/17/2013	2.68	NP	-	16.62
	9/9/2013	5.88	NP	-	13.42
	12/4/2013	8.85	NP	-	10.45
	3/3/2014	3.80	NP	-	15.50
	6/18/2014	5.30	NP	-	14.00
	8/26/2014	5.65	NP	-	13.65
	12/8/2014	4.00	NP	-	15.30
	3/3/2015	4.63	NP	-	14.67
	<b>6/9/2015</b>	<b>5.76</b>	<b>NP</b>	-	<b>13.54</b>
	<b>8/19/2015</b>	<b>4.09</b>	<b>NP</b>	-	<b>15.21</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>U-24A</b>	12/17/2007	9.19	NP	-	10.75
(19.94)	1/22/2008	9.09	NP	-	10.85
	3/24/2008	8.83	NP	-	11.11
	6/23/2008	7.14	NP	-	12.80
	9/22/2008	9.93	NP	-	10.01
	1/5/2009	7.80	NP	-	12.14
	3/16/2009	8.75	NP	-	11.19
	6/15/2009	8.76	NP	-	11.18
	9/14/2009	9.53	NP	-	10.41
	12/21/2009	8.69	NP	-	11.25
	3/16/2010	8.70	NP	-	11.24
	6/21/2010	7.31	NP	-	12.63
	9/20/2010	9.10	NP	-	10.84
	12/14/2010	7.22	NP	-	12.72
	3/21/2011	7.11	NP	-	12.83
	6/9/2011	NM	NM	NM	NM
	9/26/2011	9.55	NP	-	10.39
	12/12/2011	9.11	NP	-	10.83
	3/26/2012	6.16	NP	-	13.78
	6/26/2012	5.33	NP	-	14.61
	9/24/2012	9.61	NP	-	10.33
	12/17/2012	7.12	NP	-	12.82
	3/25/2013	8.67	NP	-	11.27
	6/17/2013	8.66	NP	-	11.28
	9/9/2013	9.14	NP	-	10.80
	12/4/2013	9.03	NP	-	10.91
	3/3/2014	8.32	NP	-	11.62
	6/18/2014	8.83	NP	-	11.11
	8/26/2014	9.38	NP	-	10.56
	12/8/2014	8.21	NP	-	11.73
	3/3/2015	9.00	NP	-	10.94
	<b>6/9/2015</b>	<b>9.32</b>	<b>NP</b>	-	<b>10.62</b>
	<b>8/19/2015</b>	<b>9.05</b>	<b>NP</b>	-	<b>10.89</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>U-24B</b>	12/17/2007	8.71	NP	-	11.38
(20.09)	1/22/2008	7.99	NP	-	12.10
	3/24/2008	8.15	NP	-	11.94
	6/23/2008	5.83	NP	-	14.26
	9/22/2008	9.71	NP	-	10.38
	1/5/2009	6.77	NP	-	13.32
	3/16/2009	8.63	NP	-	11.46
	6/15/2009	7.22	NP	-	12.87
	9/14/2009	9.35	NP	-	10.74
	12/21/2009	7.99	NP	-	12.10
	3/16/2010	8.56	NP	-	11.53
	6/21/2010	5.21	NP	-	14.88
	9/20/2010	9.14	NP	-	10.95
	12/14/2010	6.46	NP	-	13.63
	3/21/2011	5.76	NP	-	14.33
	6/9/2011	NM	NM	NM	NM
	9/26/2011	9.06	NP	-	11.03
	12/12/2011	8.59	NP	-	11.50
	3/26/2012	5.33	NP	-	14.76
	6/26/2012	5.13	NP	-	14.96
	9/24/2012	9.12	NP	-	10.97
	12/17/2012	5.69	NP	-	14.40
	3/25/2013	7.33	NP	-	12.76
	6/17/2013	17.33	NP	-	2.76
	9/9/2013	9.01	NP	-	11.08
	12/4/2013	8.62	NP	-	11.47
	3/3/2014	7.18	NP	-	12.91
	6/18/2014	7.50	NP	-	12.59
	8/26/2014	8.84	NP	-	11.25
	12/8/2014	5.05	NP	-	15.04
	3/3/2015	7.81	NP	-	12.28
	<b>6/9/2015</b>	<b>8.49</b>	<b>NP</b>	-	<b>11.60</b>
	<b>8/19/2015</b>	<b>8.48</b>	<b>NP</b>	-	<b>11.61</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>U-25</b>	12/17/2007	6.19	NP	-	14.80
(20.99)	1/22/2008	5.83	NP	-	15.16
	3/24/2008	6.18	NP	-	14.81
	6/23/2008	6.16	NP	-	14.83
	9/22/2008	7.22	NP	-	13.77
	1/5/2009	5.01	NP	-	15.98
	3/16/2009	6.37	NP	-	14.62
	6/15/2009	5.55	NP	-	15.44
	9/14/2009	6.95	NP	-	14.04
	12/21/2009	5.85	NP	-	15.14
	3/16/2010	6.04	NP	-	14.95
	6/21/2010	4.72	NP	-	16.27
	9/20/2010	6.04	NP	-	14.95
	12/14/2010	4.17	NP	-	16.82
	3/21/2011	4.39	NP	-	16.60
	6/9/2011	2.50	NP	-	18.49
	9/26/2011	6.13	NP	-	14.86
	12/12/2011	5.59	NP	-	15.40
	3/26/2012	4.45	NP	-	16.54
	6/26/2012	5.01	NP	-	15.98
	9/24/2012	6.27	NP	-	14.72
	12/17/2012	3.88	NP	-	17.11
	3/25/2013	5.59	NP	-	15.40
	6/17/2013	5.03	NP	-	15.96
	9/9/2013	6.42	NP	-	14.57
	12/4/2013	6.33	NP	-	14.66
	3/3/2014	5.41	NP	-	15.58
	6/18/2014	5.67	NP	-	15.32
	8/26/2014	6.18	NP	-	14.81
	12/8/2014	5.05	NP	-	15.94
	3/3/2015	5.10	NP	-	15.89
	<b>6/9/2015</b>	<b>6.05</b>	<b>NP</b>	-	<b>14.94</b>
	<b>8/19/2015</b>	<b>6.05</b>	<b>NP</b>	-	<b>14.94</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>U-26</b>	12/17/2007	7.70	NP	-	11.81
(19.51)	1/22/2008	7.45	NP	-	12.06
	3/24/2008	7.65	NP	-	11.86
	6/23/2008	6.50	NP	-	13.01
	9/22/2008	9.48	NP	-	10.03
	1/5/2009	6.80	NP	-	12.71
	3/16/2009	7.33	NP	-	12.18
	6/15/2009	7.79	NP	-	11.72
	9/14/2009	8.85	NP	-	10.66
	12/21/2009	7.23	NP	-	12.28
	3/16/2010	7.47	NP	-	12.04
	6/21/2010	7.09	NP	-	12.42
	9/20/2010	7.78	NP	-	11.73
	12/14/2010	4.53	NP	-	14.98
	3/21/2011	6.40	NP	-	13.11
	6/9/2011	NM	NM	NM	NM
	9/26/2011	8.15	NP	-	11.36
	12/12/2011	7.80	NP	-	11.71
	3/26/2012	5.74	NP	-	13.77
	6/26/2012	4.65	NP	-	14.86
	9/24/2012	8.61	NP	-	10.90
	12/17/2012	6.05	NP	-	13.46
	3/25/2013	7.96	NP	-	11.55
	6/17/2013	8.15	NP	-	11.36
	9/9/2013	8.42	NP	-	11.09
	12/4/2013	9.10	NP	-	10.41
	3/3/2014	7.18	NP	-	12.33
	6/18/2014	7.94	NP	-	11.57
	8/26/2014	8.28	NP	-	11.23
	12/8/2014	7.50	NP	-	12.01
	3/3/2015	7.75	NP	-	11.76
	<b>6/9/2015</b>	<b>8.18</b>	<b>NP</b>	-	<b>11.33</b>
	<b>8/19/2015</b>	<b>8.51</b>	<b>NP</b>	-	<b>11.00</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>U-27</b>	12/17/2007	11.87	NP	-	14.57
(26.44)	1/22/2008	11.64	NP	-	14.80
	3/24/2008	11.76	NP	-	14.68
	6/23/2008	11.35	NP	-	15.09
	9/22/2008	13.85	NP	-	12.59
	1/5/2009	9.08	NP	-	17.36
	3/16/2009	11.89	NP	-	14.55
	6/15/2009	11.97	NP	-	14.47
	9/14/2009	13.32	NP	-	13.12
	12/21/2009	10.82	NP	-	15.62
	3/16/2010	10.88	NP	-	15.56
	6/21/2010	9.18	NP	-	17.26
	9/20/2010	10.66	NP	-	15.78
	12/14/2010	9.45	NP	-	16.99
	3/21/2011	8.50	NP	-	17.94
	6/9/2011	6.91	NP	-	19.53
	9/26/2011	10.88	NP	-	15.56
	12/12/2011	9.41	NP	-	17.03
	3/26/2012	9.02	NP	-	17.42
	6/26/2012	9.43	NP	-	17.01
	9/24/2012	11.52	NP	-	14.92
	12/17/2012	8.61	NP	-	17.83
	3/25/2013	10.72	NP	-	15.72
	6/17/2013	11.25	NP	-	15.19
	9/9/2013	11.90	NP	-	14.54
	12/4/2013	11.40	NP	-	15.04
	3/3/2014	10.69	NP	-	15.75
	6/18/2014	10.79	NP	-	15.65
	8/26/2014	11.21	NP	-	15.23
	12/8/2014	10.05	NP	-	16.39
	3/3/2015	9.49	NP	-	16.95
	<b>6/9/2015</b>	<b>11.18</b>	<b>NP</b>	<b>-</b>	<b>15.26</b>
	<b>8/19/2015</b>	<b>11.45</b>	<b>NP</b>	<b>-</b>	<b>14.99</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>U-28</b>	12/17/2007	10.28	NP	-	9.78
(20.06)	1/22/2008	9.75	NP	-	10.31
	3/24/2008	9.96	NP	-	10.10
	6/23/2008	7.86	NP	-	12.20
	9/22/2008	17.78	NP	-	2.28
	1/5/2009	7.79	NP	-	12.27
	3/16/2009	9.45	NP	-	10.61
	6/15/2009	9.50	NP	-	10.56
	9/14/2009	10.03	NP	-	10.03
	12/21/2009	9.40	NP	-	10.66
	3/16/2010	8.97	NP	-	11.09
	6/21/2010	6.66	NP	-	13.40
	9/20/2010	8.57	NP	-	11.49
	12/14/2010	8.53	NP	-	11.53
	3/21/2011	6.62	NP	-	13.44
	6/9/2011	NM	NM	NM	NM
	9/26/2011	8.95	NP	-	11.11
	12/12/2011	8.59	NP	-	11.47
	3/26/2012	6.00	NP	-	14.06
	6/26/2012	5.02	NP	-	15.04
	9/24/2012	9.56	NP	-	10.50
	12/17/2012	6.22	NP	-	13.84
	3/25/2013	9.37	NP	-	10.69
	6/17/2013	9.79	NP	-	10.27
	9/9/2013	10.45	NP	-	9.61
	12/4/2013	9.95	NP	-	10.11
	3/3/2014	8.63	NP	-	11.43
	6/18/2014	9.11	NP	-	10.95
	8/26/2014	9.84	NP	-	10.22
	12/8/2014	8.64	NP	-	11.42
	3/3/2015	8.93	NP	-	11.13
	<b>6/9/2015</b>	<b>9.52</b>	<b>NP</b>	-	<b>10.54</b>
	<b>8/19/2015</b>	<b>10.40</b>	<b>NP</b>	-	<b>9.66</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>U-29A</b>	12/17/2007	NM	NM	NM	NM
(33.40)	1/22/2008	17.65	NP	-	15.75
	3/24/2008	18.00	17.85	0.15	15.28
	6/23/2008	18.02	18.00	0.02	15.36
	9/22/2008	18.36	NP	-	15.04
	1/5/2009	16.59	NP	-	16.81
	3/16/2009	17.63	NP	-	15.77
	6/15/2009	18.25	NP	-	15.15
	9/14/2009	17.65	NP	-	15.75
	12/21/2009	NM	NM	NM	NM
	3/16/2010	16.72	NP	-	16.68
	6/21/2010	16.78	NP	-	16.62
	9/20/2010	16.20	NP	-	17.20
	12/14/2010	15.38	NP	-	18.02
	3/21/2011	15.16	NP	-	18.24
	6/9/2011	13.87	NP	-	19.53
	9/26/2011	16.35	NP	-	17.05
	12/12/2011	16.05	NP	-	17.35
	3/26/2012	15.91	NP	-	17.49
	6/26/2012	16.31	NP	-	17.09
	9/24/2012	17.23	NP	-	16.17
	12/17/2012	15.05	NP	-	18.35
	3/25/2013	17.11	NP	-	16.29
	6/17/2013	17.32	NP	-	16.08
	9/9/2013	18.12	NP	-	15.28
	12/4/2013	18.32	NP	-	15.08
	3/3/2014	17.67	NP	-	15.73
	6/18/2014	16.86	NP	-	16.54
	8/26/2014	17.10	NP	-	16.30
	12/8/2014	16.98	NP	-	16.42
	3/3/2015	16.20	NP	-	17.20
	<b>6/9/2015</b>	<b>16.92</b>	<b>NP</b>	-	<b>16.48</b>
	<b>8/19/2015</b>	<b>17.41</b>	<b>NP</b>	-	<b>15.99</b>

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>U-29B</b>	12/17/2007	NM	NM	NM	NM
(32.85)	1/22/2008	32.30	NP	-	0.55
	3/24/2008	19.73	NP	-	13.12
	6/23/2008	36.12	NP	-	-3.27
	9/22/2008	20.60	NP	-	12.25
	1/5/2009	18.95	NP	-	13.90
	3/16/2009	23.71	NP	-	9.14
	6/15/2009	19.59	NP	-	13.26
	9/14/2009	20.17	NP	-	12.68
	12/21/2009	NM	NM	NM	NM
	3/16/2010	19.50	NP	-	13.35
	6/21/2010	18.33	NP	-	14.52
	9/20/2010	18.73	NP	-	14.12
	12/14/2010	18.37	NP	-	14.48
	3/21/2011	19.00	NP	-	13.85
	6/9/2011	14.96	NP	-	17.89
	9/26/2011	19.02	NP	-	13.83
	12/12/2011	19.97	NP	-	12.88
	3/26/2012	11.46	NP	-	21.39
	6/26/2012	16.29	NP	-	16.56
	9/24/2012	19.32	NP	-	13.53
	12/17/2012	16.49	NP	-	16.36
	3/25/2013	19.66	NP	-	13.19
	6/17/2013	18.61	NP	-	14.24
	9/9/2013	19.61	NP	-	13.24
	12/4/2013	20.07	NP	-	12.78
	3/3/2014	18.44	NP	-	14.41
	6/18/2014	17.82	NP	-	15.03
	8/26/2014	19.45	NP	-	13.40
	12/8/2014	19.02	NP	-	13.83
	3/3/2015	18.15	NP	-	14.70
	<b>6/9/2015</b>	<b>18.97</b>	<b>NP</b>	-	<b>13.88</b>
	<b>8/19/2015</b>	<b>19.13</b>	<b>NP</b>	-	<b>13.72</b>
<b>U-29C</b>	12/17/2007	NM	NM	NM	NM
(32.73)	1/22/2008	28.25	NP	-	4.48
	3/24/2008	22.03	NP	-	10.70
	6/23/2008	18.00	NP	-	14.73
	9/22/2008	24.79	NP	-	7.94
	1/5/2009	18.99	NP	-	13.74
	3/16/2009	22.56	NP	-	10.17
	6/15/2009	20.73	NP	-	12.00

**TABLE 1C**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA**  
 Phillips 66 Company - Willbridge Terminal  
 Portland, Oregon

Well			Depth to	SPH	
Designation	Date	Depth to	SPH	Thickness	Groundwater
(TOC)	Gauged	Groundwater	(feet)	(feet)	Elevation
<b>U-29C</b>	9/14/2009	24.49	NP	-	8.24
	12/21/2009	NM	NM	NM	NM
	3/16/2010	23.02	NP	-	9.71
	6/21/2010	20.50	NP	-	12.23
	9/20/2010	21.95	NP	-	10.78
	12/14/2010	20.43	NP	-	12.30
	3/21/2011	18.59	NP	-	14.14
	6/9/2011	16.02	NP	-	16.71
	9/26/2011	21.49	NP	-	11.24
	12/12/2011	23.11	NP	-	9.62
	3/26/2012	17.78	NP	-	14.95
	6/26/2012	17.90	NP	-	14.83
	9/24/2012	24.12	NP	-	8.61
	12/17/2012	19.06	NP	-	13.67
	3/25/2013	22.96	NP	-	9.77
	6/17/2013	22.03	NP	-	10.70
	9/9/2013	23.86	NP	-	8.87
	6/18/2014	12.03	NP	-	20.70
	8/26/2014	23.18	NP	-	9.55
	12/8/2014	20.95	NP	-	11.78
	3/3/2015	21.93	NP	-	10.80
	<b>6/9/2015</b>	<b>22.85</b>	<b>NP</b>	-	<b>9.88</b>
	<b>8/19/2015</b>	<b>23.41</b>	<b>NP</b>	-	<b>9.32</b>

**NOTES:**

Survey information obtained from Chase, Jones and Associates December 29, 1998 "Well and Boring Location" survey, or from SAIC's groundwater elevation tables where not otherwise available.

Survey information is relative to City of Portland Datum.

Data collected prior to 4Q11 are presented as they were reported by previous consultants.

Sheen = Unmeasureable SPH less than 0.01 feet thick

SPH = Separate phase hydrocarbons

TOC = Top of casing original surveyed elevation & subsequent re-surveyed elevations

DTW = Depth to water

DTP = Depth to product (SPH)

NP = No measurable product

NA = Not applicable

NM = Not measured

\* = SPH recovered for latest quarter monitored

\*\* = Unable to determine due to SPH viscosity

- = No measurable product thickness

GWE = TOC -(DTW - (0.8 x DTP - DTW)), where 0.8 used as density of the SPH

U-24B recorded elevation on 6/17/2013 is an apparent field measurement error based on comparison with historical data

U-5A recorded elvation on 9/9/2013 is an apparent field measurement error based on comparison with historical data

**TABLE 2**  
**GROUNDWATER ANALYTICAL RESULTS - TPH, BTEX, AND MTBE COMPOUNDS**  
 Willbridge Terminals  
 Portland, Oregon

Well/Sample	Date	TPH-G (µg/L)	TPH-D (µg/L)	TPH-O (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes <sup>T</sup> (µg/L)	MTBE (µg/L)	TOC (µg/L)
Identification	Sampled									
<b>CHEVRON</b>										
B-9	05/23/00	-	-	-	ND	0.535	0.737	ND	-	-
	08/25/00	-	-	-	ND	ND	ND	ND	-	-
	11/30/00	-	-	-	ND	ND	ND	ND	-	-
	02/22/01	-	-	-	ND	ND	ND	ND	-	-
	05/17/01	-	-	-	ND	ND	ND	ND	-	-
	09/19/01	-	-	-	ND	ND	0.913	ND	-	-
	03/21/02	-	-	-	ND	ND	ND	ND	-	-
	09/24/02	-	-	-	ND	ND	ND	ND	-	-
	03/20/03	-	-	-	ND	ND	ND	ND	-	-
	03/30/04	-	-	-	<0.500	0.560	<0.500	<1.00	-	-
	10/06/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	03/08/05	-	-	-	<1.00	<1.00	<1.00	<2.00	<1.00	-
	06/22/05	-	-	-	<1.00	<1.00	<1.00	<3.00	<1.00	-
	09/21/05	-	-	-	<1.00	<1.00	<1.00	<3.00	<1.00	-
	09/26/06	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/22/07	-	-	-	<0.200	<1.00	<1.00	<2.00	<1.00	-
B-9A	09/19/07	-	-	-	0.900	2.08	<1.00 <sup>10</sup>	3.28	<4.00 <sup>10</sup>	-
	03/25/08	478	105,000 <sup>5</sup>	2,620 <sup>12</sup>	<0.200	<0.500	<0.500	<1.00	<2.00	-
	06/24/08	1,770	26,200	961	0.160	0.360	<1.00	0.190	0.200	-
	09/23/08	404	37,900	1,720	0.100	0.190	<1.00	0.170	0.0900	-
dup	09/23/08	469	19,500	972	<0.200	0.210	<1.00	0.220	<1.00	-
	01/06/09	589	16,700	566	0.100	0.270	<1.00	0.160	0.100	-
dup	01/06/09	549	1,280	<490	0.110	0.310	0.100	0.200	0.120	-
	03/24/09	439	18,700	867	<0.200	<1.00	<1.00	<3.00	<1.00	-
	09/22/09	285	20,200	1,050	<0.200	<1.00	<1.00	<3.00	<1.00	-
dup	09/22/09	550	19,200	902	<0.200	<1.00	<1.00	<3.00	<1.00	-
	03/18/10	606	21,400	1,170	<0.200	<1.00	<1.00	<3.00	<1.00	-
	03/29/13	760	16,000	1,200	<1.0	<1.0	<1.0	<3.0	<1.0	-
	09/16/13	690	1,400	<260	<0.20	<0.50	<0.50	<1.0	<1.0	-
	09/10/14	550	7,300	970	<0.20	<0.50	<0.50	<1.0	<1.0	-
	03/09/15	1,000	9,200	4,900	<2.0	<2.0	<3.0	<5.0	<1.0	-
	<b>09/14/15</b>	<b>1,000</b>	<b>8,700</b>	<b>2,600</b>	<b>&lt;2.0</b>	<b>&lt;2.0</b>	<b>&lt;3.0</b>	<b>&lt;5.0</b>	<b>&lt;1.0</b>	-
B-10	02/18/00	-	-	-	3.85	4.42	8.78	14.7	-	-
dup	02/18/00	-	-	-	3.72	4.1	7.8	13.8	-	-
	05/23/00	-	-	-	3.72	4.1	7.8	13.8	-	-
dup	05/23/00	-	-	-	1.2	2.93	4.14	6.53	-	-
	08/25/00	-	-	-	1.40	2.80	1.45	4.80	-	-
	11/30/00	-	-	-	1.20	2.69	ND	4.60	-	-
	02/23/01	-	-	-	3.74	0.983	3.94	6.78	-	-
	05/17/01	-	-	-	4.87	1.25	4.36	8.56	-	-
	09/19/01	-	-	-	0.711	ND	1.80	2.50	-	-
	03/21/02	-	-	-	3.15	2.60	1.19	2.43	-	-
	09/24/02	-	-	-	1.41	1.43	0.753	2.46	-	-
	03/20/03	-	-	-	0.680	1.76	ND	2.34	-	-
	09/29/03	-	-	-	2.26	1.60	0.781	4.29	-	-
	03/30/04	-	-	-	<0.500	1.42	<0.500	2.66	-	-
	10/06/04	-	-	-	0.810	2.62	<0.500	6.55	-	-
	03/08/05	-	-	-	<1.00	2.00	<1.00	2.89	<1.00	-
	09/21/05	-	-	-	<1.00	<1.00	<1.00	<3.00	<1.00	-
	03/14/06	-	-	-	<1.00	1.08	<1.00	<3.00	<1.00	-
	09/26/06	-	-	-	0.970	3.17	0.770	4.09	<2.00	-
	03/21/07	-	-	-	0.770	1.79	<1.00	6.20	<1.00	-
dup	03/21/07	-	-	-	0.720	1.74	<1.00	5.52	<1.00	-
	09/18/07	-	-	-	<0.400 <sup>10</sup>	<1.00 <sup>10</sup>	<1.00 <sup>10</sup>	<2.00 <sup>10</sup>	<4.00 <sup>10</sup>	-
	03/25/08	618	695 <sup>3</sup>	<500	0.730	1.35	<0.500	4.30	-	-
	09/23/08	792	2,080	<485	1.02	1.14	0.450	2.90	<1.00	-
	03/24/09	743	13,700	<500	1.06	1.46	<1.00	2.15	<1.00	-
dup	03/24/09	746	25,100	722	0.980	1.31	<1.00	2.02	<1.00	-
	09/22/09	697	5,660	<500	0.720	1.13	<1.00	2.17	<1.00	-
	03/18/10	497	2,150	<495	0.390	1.43	<1.00	<3.00	<1.00	-
	09/21/10	954	9,200	<472	0.490	<1.00	<1.00	<3.00	<1.00	-
	03/23/11	767	1,870	<490	0.330	1.15	<1.00	<3.00	<1.00	-

**TABLE 2**  
**GROUNDWATER ANALYTICAL RESULTS - TPH, BTEX, AND MTBE COMPOUNDS**  
 Willbridge Terminals  
 Portland, Oregon

Well/Sample Identification	Date Sampled	TPH-G (µg/L)	TPH-D (µg/L)	TPH-O (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes <sup>T</sup> (µg/L)	MTBE (µg/L)	TOC (µg/L)
B-10	10/03/11	739	2,150	<500	0.440	2.90	<2.00	<6.00	<2.00	-
	04/05/12	670	1,600 *	76 J *	0.35 J	0.95 J	0.18 J	2.2 J	<0.090	-
	10/1/12	690	7,900	670	<1.0	<1.0	<1.0	<3.0	<1.0	-
	4/1/13	920	6,700	<550	<1.0	<1.0	<1.0	<3.0	<1.0	-
	9/16/13	760	1,500	<260	0.20	0.62	<0.50	1.2	<1.0	-
dup	9/16/13	690	-	-	<0.20	<0.50	<0.50	1.3	<1.0	-
	3/17/14	740	3,300	380	0.26	0.57	<0.50	1.2	<1.0	-
dup	3/17/14	830	6,100	560	0.27	0.55	<0.50	1.3	<1.0	-
	9/10/14	510	9,400	620	<0.20	<0.50	<0.50	1.0	1.0	-
dup	9/10/14	560	3,000	<270	<0.20	<0.50	<0.50	<1.0	<1.0	-
	3/18/15	570	37,000	<5,100	<2.0	<2.0	<3.0	<5.0	<1.0	-
dup	3/18/15	660	13,000	<2,800	<2.0	<2.0	<3.0	<5.0	<1.0	-
	9/9/15	660	4,600	1,300	<2.0	<2.0	<3.0	<5.0	<1.0	-
B-21	09/19/01	-	-	-	ND	ND	1.47	ND	-	-
	03/21/02	-	-	-	ND	0.679	ND	ND	-	-
	09/24/02	-	-	-	ND	1.20	0.517	1.20	-	-
	03/20/03	-	-	-	ND	ND	ND	ND	-	-
	09/29/03	-	-	-	0.659	1.3	<0.500	2.20	-	-
	03/29/04	-	-	-	<0.500	0.720	<0.500	<1.00	-	-
	10/06/04	-	-	-	<0.500	<0.880	<0.500	<1.00	-	-
	03/08/05	-	-	-	<1.00	<1.00	<1.00	<2.00	17.4	-
	09/22/05	-	-	-	<1.00	1.15	<1.00	<3.00	11.2	-
	03/15/06	-	-	-	<1.00	<1.00	<1.00	<3.00	1.30	-
	09/26/06	-	-	-	0.460	0.980	<0.500	1.01	<2.00	-
	03/21/07	-	-	-	0.400	1.64	<1.00	<2.00	1.20	-
	09/19/07	-	-	-	0.330	1.78	<0.500	1.03	<2.00	-
	03/26/08 <sup>13</sup>	431	7,960 <sup>5</sup>	<490	0.570	1.93	<0.500	1.18	<2.00	-
	09/23/08	627	2,100	<485	0.450	1.99	0.100	1.79	0.370	-
	03/24/09	674	36,300	847	0.350	1.59	<1.00	<1.50	<1.00	-
	09/22/09	472	21,000	575	0.400	1.60	<1.00	1.47	<1.00	-
	03/18/10	604	10,000	<500	0.430	1.49	<1.00	1.42	<1.00	-
	09/22/10	713	24,200	541	0.450	1.72	<1.00	1.37	<1.00	-
dup	09/22/10	566	50,500	1,190	0.520	<2.00	<2.00	<6.00	<2.00	-
	03/23/11	627	4,070	<485	0.500	1.54	<1.00	1.38	<1.00	-
	09/30/11	733	22,300	639	0.400	1.86	<1.00	1.52	<1.00	-
	4/5/12	590	4,300 *	130 J *	0.46 J	1.9	<0.080	2.1 J	0.094 J	-
B-28	02/18/00	-	-	-	0.754	0.368	0.545	0.986	-	-
	05/23/00	-	-	-	ND	ND	ND	ND	-	-
	08/25/00	-	-	-	ND	ND	ND	ND	-	-
	11/30/00	-	-	-	ND	ND	ND	ND	-	-
	02/23/01	-	-	-	ND	ND	ND	ND	-	-
	05/17/01	-	-	-	ND	ND	ND	ND	-	-
	09/20/01	-	-	-	2.12	2.93	ND	ND	-	-
	03/21/02	-	-	-	ND	ND	ND	ND	-	-
	09/24/02	-	-	-	ND	ND	ND	ND	-	-
	03/20/03	-	-	-	ND	ND	ND	ND	-	-
	09/29/03	-	-	-	0.699	<0.500	1.04	<1.00	-	-
	03/29/04	-	-	-	<0.500	<0.500	0.930	<1.00	-	-
	03/09/05	-	-	-	1.59	-	4.68	<1.00	<1.00	-
	09/21/05	-	-	-	<1.00	<1.00	<1.00	<3.00	<1.00	-
	03/14/06	-	-	-	<1.00	<1.00	<1.00	<3.00	<1.00	-
	09/28/06	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/18/07	-	-	-	0.350	<0.500	<0.500	<1.00	<2.00	-
	03/25/08	<80.0	<245	<490	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/23/08	<80.0	<250	<500	<0.200	<1.00	<1.00	<3.00	1.11	-
	03/24/09	<80.0	<248	<495	<0.200	<1.00	<1.00	<3.00	1.27	-
	09/22/09	<80.0	<250	<500	<0.200	<1.00	<1.00	<3.00	1.16	-
	09/21/10	<80.0	<97.1	<485	<0.200	<1.00	<1.00	<3.00	1.57	-
	03/23/11	<80.0	<97.1	<485	<0.200	<1.00	<1.00	<3.00	1.44	-
	10/03/11	<80.0	<96.2	<481	<0.200	<1.00	<1.00	<3.00	1.59	-
	04/05/12	<33	37 J *	<40 *	<0.060	<0.090	<0.080	<0.31	1.7	-
	10/08/2012	<80	570	<500	<1.0	<1.0	<1.0	<3.0	1.5	-
	4/1/13	<80	480	<530	<1.0	<1.0	<1.0	<3.0	1.8	-

**TABLE 2**  
**GROUNDWATER ANALYTICAL RESULTS - TPH, BTEX, AND MTBE COMPOUNDS**  
 Willbridge Terminals  
 Portland, Oregon

Well/Sample Identification	Date Sampled	TPH-G (µg/L)	TPH-D (µg/L)	TPH-O (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes <sup>T</sup> (µg/L)	MTBE (µg/L)	TOC (µg/L)
	9/18/13	<80	<100	<250	<0.2	<0.5	<0.5	<1.0	1.8	-
	3/18/14	<50	470	<260	<0.20	<0.50	<0.50	<1.0	1.6	-
<b>B-28</b>	9/10/14	<50	420	<280	<0.20	<0.50	<0.50	<1.0	1.6	-
	3/9/15	<100	540	470	<2.0	<2.0	<3.0	<5.0	1.6	-
	<b>9/8/15</b>	<b>&lt;50</b>	<b>470</b>	<b>310</b>	<b>&lt;2.0</b>	<b>&lt;2.0</b>	<b>&lt;3.0</b>	<b>&lt;5.0</b>	<b>1.5</b>	-
<b>B-29</b>	09/20/01	-	-	-	1.3	ND	0.71	ND	-	-
	03/21/02	-	-	-	ND	ND	ND	ND	-	-
	09/24/02	-	-	-	ND	ND	ND	ND	-	-
	03/20/03	-	-	-	ND	ND	ND	ND	-	-
	09/29/03	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	03/29/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	03/09/05	-	-	-	<1.00	<1.00	<1.00	<2.00	<1.00	-
	09/21/05	-	-	-	<1.00	<1.00	<1.00	<3.00	<1.00	-
	03/14/06	-	-	-	<1.00	<1.00	<1.00	<3.00	<1.00	-
	09/28/06	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/22/07	-	-	-	<0.200	<1.00	<1.00	<2.00	<1.00	-
	09/18/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/25/08	<80.0	<245	<490	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/23/08	<80.0	<243	<485	<0.200	<1.00	<1.00	<3.00	0.100	-
	03/24/09	<80.0	248	<495	<0.200	<1.00	<1.00	<3.00	<1.00	-
	09/22/09	<80.0	<250	<500	<0.200	<1.00	<1.00	<3.00	<1.00	-
	03/19/10	<80.0	<248	<495	<0.200	<1.00	<1.00	<3.00	<1.00	-
	09/21/10	<80.0	<94.3	<472	<0.200	<1.00	<1.00	<3.00	<1.00	-
	03/23/11	<80.0	<98.0	<490	<0.200	<1.00	<1.00	<3.00	<1.00	-
	10/03/11	<80.0	<98.0	<490	<0.200	<1.00	<1.00	<3.00	<1.00	-
	04/05/12	<33	130	57 J	<0.060	<0.090	<0.080	<0.31	0.17 J	-
	10/08/2012	<80	410	<500	<1.0	<1.0	<1.0	<3.0	<1.0 *	-
	4/1/13	<80	330	<500	<1.0	<1.0	<1.0	<3.0	<1.0	-
	9/18/13	<80	<100	<250	<0.2	<0.5	<0.5	<1.0	<1.0	-
	3/18/14	<50	310	<270	<0.20	<0.50	<0.50	<1.0	<1.0	-
	9/9/14	<50	410	<270	<0.20	<0.50	<0.50	<1.0	<1.0	-
	3/9/15	<100	340	310	<2.0	<2.0	<3.0	<5.0	<1.0	-
	<b>9/8/15</b>	<b>&lt;50</b>	<b>420</b>	<b>280</b>	<b>&lt;2.0</b>	<b>&lt;2.0</b>	<b>&lt;3.0</b>	<b>&lt;5.0</b>	<b>0.17 J</b>	-
<b>B-30</b>	02/18/00	-	-	-	38.9	5.29	2.44	10.3	-	-
	05/23/00	-	-	-	18.8	2.53	0.682	4.57	-	-
	08/25/00	-	-	-	81.2	12.5	2.35	21.9	-	-
	11/30/00	-	-	-	59.6	10.0	1.92	18.8	-	-
	02/23/01	-	-	-	61.6	5.31	9.52	19.4	-	-
dup**	02/23/01	-	-	-	61.8	3.24	9.23	16.0	-	-
	05/17/01	-	-	-	95.1	4.12	18.0	14.6	-	-
	09/20/01	-	-	-	38.7	ND	5.66	ND	-	-
dup	09/20/01	-	-	-	38.6	ND	6.18	ND	-	-
	03/21/02	-	-	-	113	17.0	6.09	24.2	-	-
	09/24/02	-	-	-	30.1	6.60	1.56	12.0	-	-
dup***	09/24/02	-	-	-	28.0	6.42	1.44	11.3	-	-
	03/20/03	-	-	-	17.3	4.49	0.500	5.96	-	-
dup*	03/20/03	-	-	-	17.4	4.43	0.510	6.68	-	-
	09/29/03	-	-	-	32.6	7.34	1.62	12.2	-	-
	03/29/04	-	-	-	15.6	3.13	1.16	7.07	-	-
dup	03/29/04	-	-	-	17.5	3.38	1.24	7.32	-	-
	03/09/05	-	-	-	12.6	3.04	<1.00	6.26	<1.00	-
	06/22/05	-	-	-	19.6	4.53	1.06	7.80	<1.00	-
	09/21/05	-	-	-	15.1	2.75	<1.00	3.72	<1.00	-
dup****	09/21/05	-	-	-	18.9	3.17	<1.00	4.40	<1.00	-
	03/14/06	-	-	-	15.9	2.53	<1.00	4.15	<1.00	-
dup	03/14/06	-	-	-	15.8	2.51	1.02	4.42	<1.00	-
	09/28/06	-	-	-	48.9	8.50	1.51	12.1	<2.00	-
	03/22/07	-	-	-	28.5	1.09	<1.00	<2.00	<1.00	-
	09/18/07	-	-	-	2.78	1.78	<0.500	4.31	<2.00	-
dup	09/18/07	-	-	-	2.55	1.23	<1.00	2.99	<1.00	-
	09/21/10	1,120	12,500	2,400	41.9	11.4	2.15	15.3	<1.00	-
	03/23/11	1,660	3,680	775	26.9	11.7	3.19	22.0	<1.00	-
dup	03/23/11	1,350	3,110	739	20.7	9.44	2.50	16.6	<2.00	-

**TABLE 2**  
**GROUNDWATER ANALYTICAL RESULTS - TPH, BTEX, AND MTBE COMPOUNDS**  
 Willbridge Terminals  
 Portland, Oregon

Well/Sample Identification	Date Sampled	TPH-G (µg/L)	TPH-D (µg/L)	TPH-O (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes <sup>T</sup> (µg/L)	MTBE (µg/L)	TOC (µg/L)
	10/03/11	752	1,250	<490	14.7	4.72	<1.00	8.31	<1.00	-
dup	10/03/11	603	1,050	<490	6.66	2.95	<1.00	4.41	<1.00	-
	04/04/12	890	1,400	430 J	18	8.7	3.1	18	<0.090	-
dup	04/04/12	960	1,000	310 J	17	8.2	2.9	17	<0.090	-
<b>B-30</b>	10/8/12	180	620	<500	2.8	1.5	<1.0	<3.0	<1.0 *	-
dup	10/8/12	150	2,000	1300	2.5	1.4	<1.0	<3.0	<1.0 *	-
	4/1/13	330	660	<510	1.3	1.2	<1.0	<3.0	<1.0	-
	9/18/13	110	130	<240	0.81	0.52	<0.5	<1.0	<1.0	-
	3/18/14	55	230	<270	<0.20	<0.50	<0.50	<1.0	<1.0	-
	9/9/14	140	1,000	720	0.73	0.76	<0.50	<1.0	<1.0	-
	3/9/15	170	780	580	3.0	<2.0	<3.0	<5.0	<1.0	-
	<b>9/8/15</b>	<b>69</b>	<b>990</b>	<b>380</b>	<b>&lt;2.0</b>	<b>&lt;2.0</b>	<b>&lt;3.0</b>	<b>&lt;2.27</b>	<b>&lt;1.0</b>	<b>-</b>
<b>CR-1</b>	09/20/01	-	-	-	ND	ND	ND	ND	-	-
	03/21/02	-	-	-	ND	ND	ND	ND	-	-
	09/24/02	-	-	-	ND	ND	ND	ND	-	-
	03/20/03	-	-	-	ND	ND	ND	ND	-	-
	09/29/03	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	03/30/04	-	-	-	25.8	1.13	120	9.06	-	-
	10/06/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	03/08/05	-	-	-	<1.00	<1.00	<1.00	<2.00	<1.00	-
	09/21/05	-	-	-	<1.00	<1.00	<1.00	<3.00	<1.00	-
	09/27/06	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/22/07	-	-	-	<0.200	<1.00	<1.00	<2.00	<1.00	-
	09/20/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/25/08	<80.0	<245	<490	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/24/08	154	376	<485	<0.400	<2.00	<2.00	<6.00	<2.00	-
	03/25/09	<80.0	<248	<495	<0.200	<1.00	<1.00	<3.00	<1.00	-
	09/22/09	<80.0	523	<500	<0.200	<1.00	<1.00	<3.00	<1.00	-
	03/19/10	87.4	<245	<490	<0.200	<1.00	<1.00	<3.00	<1.00	-
dup	03/19/10	150	<245	<490	<0.200	<1.00	<1.00	<3.00	<1.00	-
	09/22/10	122	7,320	580	<0.200	<1.00	<1.00	<3.00	<1.00	-
	03/24/11	<80.0	115	<472	<0.200	<1.00	<1.00	<3.00	<1.00	-
	10/05/11	<80.0	220	<485	<0.200	<1.00	<1.00	<3.00	<1.00	-
	04/05/12	89	31,000 *	1,700 *	<0.060	<0.090	<0.080	<0.31	<0.090	-
	10/01/2012	<80	1,600	760	<1.0	<1.0	<1.0	<3.0	<1.0	-
	03/29/13	<80	920	<520	<1.0	<1.0	<1.0	<3.0	<1.0	-
Dup	03/29/13	<80	790	<490	<1.0	<1.0	<1.0	<3.0	<1.0	-
	09/16/13	<80	<110	<270	<0.20	<0.50	<0.50	<1.0	<1.0	-
	03/17/14	<50	800	330	<0.20	<0.50	<0.50	<1.0	<1.0	-
	09/09/14	<50	910	390	<0.20	<0.50	<0.50	<1.0	<1.0	-
	03/09/15	<100	990	1,900	<2.0	<2.0	<3.0	<5.0	<1.0	-
Dup	03/09/15	<100	970	1,800	<2.0	<2.0	<3.0	<5.0	<1.0	-
	<b>09/11/15</b>	<b>&lt;50</b>	<b>620</b>	<b>730</b>	<b>&lt;2.0</b>	<b>&lt;2.0</b>	<b>&lt;3.0</b>	<b>&lt;5.0</b>	<b>&lt;1.0</b>	<b>-</b>
<b>Kinder Morgan</b>										
<b>MW-8</b>	02/16/00	-	-	-	9.79	2.51	7.97	12.1	-	-
	05/31/00	-	-	-	16.6	3.85	3.05	10.2	-	-
	08/24/00	-	-	-	26.0	5.78	28.2	24.0	-	-
	12/01/00	-	-	-	17.8	4.59	3.19	11.1	-	-
	02/22/01	-	-	-	11.4	ND	2.79	8.88	-	-
	05/16/01	-	-	-	15.1	1.18	2.79	6.4	-	-
	09/21/01	-	-	-	13.0	1.08	9.54	7.66	-	-
	03/14/02	-	-	-	1.95	1.09	0.618	2.22	-	-
dup	03/14/02	-	-	-	1.96	0.955	ND	1.93	-	-
	09/27/02	-	-	-	4.85	2.30	0.819	4.25	-	-
	03/18/03	-	-	-	3.12	ND	ND	2.24	-	-
dup	03/18/03	-	-	-	2.36	ND	ND	2.62	-	-
	09/24/03	-	-	-	5.00	1.20	0.759	7.05	-	-
	03/30/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	09/27/04	-	-	-	3.03	0.576	<0.500	1.80	-	-
dup	09/27/04	-	-	-	3.25	<0.500	<0.500	1.75	-	-
	03/29/05	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/21/05	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/15/06	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-

**TABLE 2**  
**GROUNDWATER ANALYTICAL RESULTS - TPH, BTEX, AND MTBE COMPOUNDS**  
 Willbridge Terminals  
 Portland, Oregon

Well/Sample Identification	Date Sampled	TPH-G (µg/L)	TPH-D (µg/L)	TPH-O (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes <sup>T</sup> (µg/L)	MTBE (µg/L)	TOC (µg/L)
dup	03/15/06	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	09/26/06	-	-	-	0.290	<0.500	<0.500	<1.00	<2.00	-
	03/22/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/20/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
dup	09/20/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/24/08	-	-	-	<0.14	<0.11	<0.13	<0.33	<0.20	-
<b>MW-8</b>	09/22/08	-	-	-	<0.50	0.17	<0.50	0.91	<0.50	-
dup	09/22/08	-	-	-	<0.50	0.20	0.050	1.05	<0.50	-
	03/16/09	-	-	-	<0.200	<1.00	<1.00	<3.00	<1.00	-
dup	03/16/09	-	-	-	<0.200	<1.00	<1.00	<3.00	<1.00	-
	09/15/09	-	-	-	<1.65	<0.500	<0.500	1.23	-	-
	03/17/10	-	-	-	<0.200	<1.00	<1.00	<3.00	<1.00	-
	09/20/10	-	-	-	14.5	<1.00	<1.00	<3.00	<1.00	-
	03/21/11	-	-	-	1.3	<0.50	<0.50	<1.5	<0.50	-
	09/27/11	<250	<250	<500	1.6	<0.50	<0.50	<0.50	-	-
	03/27/12	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	-	-
	9/24/12	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	-	1,900
	3/25/13	<250	<250	<500	<0.5	<0.5	<0.5	<0.5	-	1,700
	9/10/13	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	<0.50	-
	3/3/14	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	<0.50	-
dup	3/3/14	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	<0.50	-
	8/26/14	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	<0.50	-
	3/3/15	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	<0.50	-
	<b>08/19/15</b>	<b>&lt;31.6</b>	<b>40.6 J</b>	<b>&lt;82.5</b>	<b>&lt;0.0896</b>	<b>&lt;0.102</b>	<b>&lt;0.158</b>	<b>&lt;0.316</b>	<b>&lt;0.102</b>	-
<b>MW-25</b>	09/21/01	-	-	-	ND	ND	ND	ND	-	-
	03/14/02	-	-	-	ND	ND	ND	ND	-	-
	09/27/02	-	-	-	ND	ND	ND	ND	-	-
	03/18/03	-	-	-	ND	ND	ND	ND	-	-
	09/29/03	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	03/30/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	09/27/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	03/28/05	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/21/05	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/15/06	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	09/26/06	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/22/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/20/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/24/08	-	-	-	<0.14	0.17 <sup>14</sup>	<0.13	<0.33	<0.20	-
	09/22/08	-	-	-	<0.50	<0.50	<0.50	<1.00	<0.50	-
	03/16/09	-	-	-	<0.200	<1.00	<1.00	<3.00	<1.00	-
	09/15/09	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	03/16/10	-	-	-	<0.200	<1.00	<1.00	<3.00	<1.00	-
	09/20/10	-	-	-	<0.200	<1.00	<1.00	<3.00	<1.00	-
	03/21/11	-	-	-	<0.50	<0.50	<0.50	<1.5	<0.50	-
	09/27/11	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	-	-
	03/27/12	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	-	-
	9/24/12	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	-	7,200
	3/26/13	<250	<250	<500	<0.5	<0.5	<0.5	<0.5	-	4,100
	9/10/13	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	<0.50	-
	3/3/14	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	<0.50	-
	8/26/14	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	<0.50	-
	3/3/15	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	<0.50	-
	<b>08/19/15</b>	<b>&lt;31.6</b>	<b>522</b>	<b>273</b>	<b>&lt;0.0896</b>	<b>&lt;0.102</b>	<b>&lt;0.158</b>	<b>&lt;0.316</b>	<b>&lt;0.102</b>	-
<b>MW-26</b>	02/17/00	-	-	-	1.31	4.01	18.6	26.2	-	-
dup	02/17/00	-	-	-	1.04	3.11	11.9	17.1	-	-
	05/30/00	-	-	-	ND	7.11	7.4	9.62	-	-
	08/23/00	-	-	-	ND	3.67	10.8	3.54	-	-
dup	08/23/00	-	-	-	ND	4.81	15.9	6.20	-	-
	12/01/00	-	-	-	3.43	29.8	7.28	15.6	-	-
	02/21/01	-	-	-	NS/S	NS/S	NS/S	NS/S	-	-
	05/17/01	-	-	-	15.1	8.76	10.1	10.6	-	-
	09/27/02	-	-	-	7.66	7.24	5.90	6.44	-	-
	03/18/03	-	-	-	9.11	ND	1.57	4.80	-	-

**TABLE 2**  
**GROUNDWATER ANALYTICAL RESULTS - TPH, BTEX, AND MTBE COMPOUNDS**

Willbridge Terminals  
Portland, Oregon

Well/Sample Identification	Date Sampled	TPH-G (µg/L)	TPH-D (µg/L)	TPH-O (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes <sup>T</sup> (µg/L)	MTBE (µg/L)	TOC (µg/L)
	09/24/03	-	-	-	2.18	<0.500	2.90	12.7	-	-
	03/30/04	-	-	-	<0.500	<0.500	<0.500	1.67	-	-
	09/27/04	-	-	-	2.41	1.42	4.64	7.57	-	-
	03/28/05	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/21/05	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/15/06	-	-	-	<0.500	<0.500	0.540	1.85	-	-
	09/26/06	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
dup	09/26/06	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
<b>MW-26</b>	03/22/07	-	-	-	<0.200	<0.500	0.600	2.35	<2.00	-
	09/20/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/24/08	-	-	-	<0.14	0.47 <sup>14</sup>	0.49 <sup>14</sup>	2.4	<0.20	-
dup	03/24/08	-	-	-	<0.14	0.51	0.49 <sup>14</sup>	2.6	<0.20	-
	09/22/08	-	-	-	<2.5	0.35	0.25	1.5	<2.5	-
	03/16/09	-	-	-	<1.00	<5.00	<5.00	<15.0	<5.00	-
	09/15/09	-	-	-	<7.05	<21.5	<4.85	<12.8	-	-
dup	09/15/09	-	-	-	<6.00	<19.3	<4.15	<135	-	-
	03/16/10	-	-	-	<0.200	<1.00	<1.00	1.02	<1.00	-
	09/20/10	-	-	-	<0.200	<1.00	<1.00	<3.00	<1.00	-
	03/21/11	-	-	-	<0.50	0.41 <sup>14</sup>	0.33 <sup>14</sup>	2.1	<0.50	-
	09/27/11	1,300	330	<500	<0.50	<0.50	<0.50	<0.50	-	-
	03/27/12	540	890	<500	<1.0	<1.0	<1.0	1.400	-	-
	9/24/12	1100	<250	<500	<0.50	<0.50	<0.50	<0.50	-	10,000
	3/26/13	550	<250	<500	<1.0	<1.0	<1.0	<1.0	-	14,000
	9/10/13	1400	410	<500	<0.50	<0.50	<0.50	<0.50	<0.50	-
	3/3/14	390	780	<500	<1.021	<1.021	<1.021	<1.021	<1.021	-
	8/26/14	720	340 <sup>22</sup>	<500	<0.50	<0.50	<0.50	<0.50	<0.50	-
	3/3/15	<250	380	<500	<0.50	<0.50	<0.50	<0.50	<0.50	-
	<b>08/19/15</b>	<b>515</b>	<b>814</b>	<b>334</b>	<b>&lt;0.0896</b>	<b>&lt;0.102</b>	<b>&lt;0.158</b>	<b>&lt;0.316</b>	<b>&lt;0.102</b>	<b>-</b>
<b>MW-33</b>	02/16/00	-	-	-	ND	0.718	0.589	1.21	-	-
	05/30/00	-	-	-	ND	ND	ND	ND	-	-
	08/24/00	-	-	-	ND	ND	ND	ND	-	-
	11/30/00	-	-	-	ND	ND	ND	ND	-	-
	02/22/01	-	-	-	ND	ND	ND	ND	-	-
dup	02/22/01	-	-	-	ND	ND	ND	ND	-	-
	05/16/01	-	-	-	ND	ND	ND	ND	-	-
	09/21/01	-	-	-	ND	ND	ND	ND	-	-
	03/14/02	-	-	-	ND	ND	ND	ND	-	-
	09/27/02	-	-	-	ND	ND	ND	ND	-	-
	03/18/03	-	-	-	ND	ND	ND	ND	-	-
	09/24/03	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	03/29/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	09/27/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	03/29/05	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/21/05	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
dup	09/21/05	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/15/06	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	09/27/06	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/22/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
dup	03/22/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/18/07	-	-	-	<0.400	<0.400	<0.400	<2.00	<1.00	-
	03/25/08	<13	<13	42 <sup>14</sup>	<0.14	<0.11	<0.13	<0.33	<0.20	-
	09/23/08	<250	14	34	<0.50	<0.50	<0.50	<1.00	<0.50	-
	03/16/09	-	-	-	<0.200	<1.00	<1.00	<3.00	<1.00	-
	09/14/09	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	03/16/10	-	-	-	<0.200	<1.00	<1.00	<3.00	<1.00	-
	09/20/10	-	-	-	<0.200	<1.00	<1.00	<3.00	<1.00	-
	03/21/11	-	-	-	<0.50	<0.50	<0.50	<1.5	<0.50	-
	09/27/11	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	-	-
	03/26/12	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	-	-
	9/24/12	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	-	2,500
	3/25/13	<250	<250	<500	<0.5	<0.5	<0.5	<0.5	-	3,300
	9/9/13	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	<0.50	-
	3/3/14	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	<0.50	-

**TABLE 2**  
**GROUNDWATER ANALYTICAL RESULTS - TPH, BTEX, AND MTBE COMPOUNDS**  
 Willbridge Terminals  
 Portland, Oregon

Well/Sample Identification	Date Sampled	TPH-G ( $\mu\text{g/L}$ )	TPH-D ( $\mu\text{g/L}$ )	TPH-O ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Ethylbenzene ( $\mu\text{g/L}$ )	Xylenes <sup>T</sup> ( $\mu\text{g/L}$ )	MTBE ( $\mu\text{g/L}$ )	TOC ( $\mu\text{g/L}$ )
	8/26/14	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	<0.50	-
	3/3/15	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	<0.50	-
	<b>08/19/15</b>	<b>&lt;31.6</b>	<b>66.0 J</b>	<b>&lt;82.5</b>	<b>&lt;0.0896</b>	<b>&lt;0.102</b>	<b>&lt;0.158</b>	<b>&lt;0.316</b>	<b>&lt;0.102</b>	-
<b>MW-34</b>	09/21/01	-	-	-	ND	ND	ND	ND	-	-
	03/14/02	-	-	-	ND	ND	ND	ND	-	-
	09/27/02	-	-	-	ND	ND	ND	ND	-	-
	03/18/03	-	-	-	ND	ND	ND	ND	-	-
	09/24/03	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	03/29/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	09/27/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
<b>MW-34</b>	03/29/05	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
dup	03/29/05	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/21/05	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/15/06	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	09/27/06	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/22/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/18/07	-	-	-	<0.400	<0.400	<0.400	<2.00	<1.00	-
	03/25/08	20 <sup>14</sup>	12 <sup>14</sup>	44 <sup>14</sup>	<0.14	0.17 <sup>14</sup>	<0.13	<0.33	<0.20	-
	06/24/08	<250	19 <sup>14</sup>	36 <sup>14</sup>	<0.045	<0.048	<0.042	<0.115	<0.070	-
	09/23/08	150	53	140	<0.50	<0.50	<0.50	0.080	0.18	5,200
	01/05/09	<80	<238	<476	<0.200	<1.00	<1.00	<1.00	<1.00	<1.00
	03/16/09	-	-	-	<0.200	<1.00	<1.00	<3.00	<1.00	-
	09/14/09	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	03/16/10	-	-	-	<0.200	<1.00	<1.00	<3.00	<1.00	-
	09/20/10	-	-	-	<0.200	<1.00	<1.00	<3.00	<1.00	-
	03/21/11	-	-	-	<0.50	<0.50	<0.50	<1.5	<0.50	-
	09/27/11	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	-	-
	03/26/12	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	-	-
	9/24/12	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	-	4,200
	3/25/13	<250	<250	<500	<0.5	<0.5	<0.5	<0.5	-	2,000
	9/9/13	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	<0.50	-
	3/3/14	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	<0.50	-
	8/26/14	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	<0.50	-
	3/3/15	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	<0.50	-
	<b>08/19/15</b>	<b>&lt;31.6</b>	<b>237</b>	<b>116 J</b>	<b>&lt;0.0896</b>	<b>&lt;0.102</b>	<b>&lt;0.158</b>	<b>&lt;0.316</b>	<b>&lt;0.102</b>	-
<b>MW-36</b>	02/16/00	-	-	-	0.322	2.36	1.32	6.29	-	-
	05/31/00	-	-	-	ND	ND	ND	ND	-	-
	08/24/00	-	-	-	ND	ND	ND	ND	-	-
	11/30/00	-	-	-	ND	ND	0.548	ND	-	-
	02/21/01	-	-	-	ND	ND	ND	ND	-	-
	05/16/01	-	-	-	0.882	ND	ND	ND	-	-
	09/21/01	-	-	-	ND	ND	ND	ND	-	-
	03/13/02	-	-	-	ND	ND	ND	ND	-	-
	03/18/03	-	-	-	ND	ND	ND	ND	-	-
	09/24/03	-	-	-	0.727	<0.500	<0.500	1.38	-	-
	03/29/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	09/27/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	09/21/05	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/15/06	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	09/27/06	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
dup	09/27/06	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/22/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/18/07	-	-	-	<0.400	<0.400	<0.400	<2.00	<1.00	-
dup	09/18/07	-	-	-	<0.400	<0.400	<0.400	<2.00	<1.00	-
	03/25/08	<13	<12	40 <sup>14</sup>	<0.14	<0.11	<0.13	<0.33	<0.20	-
	09/23/08	120	20	<500	<0.50	<0.50	<0.50	0.18	0.080	-
	03/16/09	-	-	-	<0.200	<1.00	<1.00	<3.00	<1.00	-
	09/14/09	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
dup	09/14/09	-	-	-	<0.500	<0.500	<0.500	1.04	-	-
	03/16/10	-	-	-	<0.200	<1.00	<1.00	<3.00	<1.00	-
	09/20/10	-	-	-	<0.200	<1.00	<1.00	<3.00	<1.00	-
	03/21/11	-	-	-	<0.50	<0.50	<0.50	<1.5	<0.50	-
	09/27/11	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	-	-

**TABLE 2**  
**GROUNDWATER ANALYTICAL RESULTS - TPH, BTEX, AND MTBE COMPOUNDS**

Willbridge Terminals  
Portland, Oregon

Well/Sample Identification	Date Sampled	TPH-G ( $\mu\text{g/L}$ )	TPH-D ( $\mu\text{g/L}$ )	TPH-O ( $\mu\text{g/L}$ )	Benzene ( $\mu\text{g/L}$ )	Toluene ( $\mu\text{g/L}$ )	Ethylbenzene ( $\mu\text{g/L}$ )	Xylenes <sup>T</sup> ( $\mu\text{g/L}$ )	MTBE ( $\mu\text{g/L}$ )	TOC ( $\mu\text{g/L}$ )
	03/26/12	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	-	-
	9/24/12	<250	<250	<250	<0.50	<0.50	<0.50	<0.50	-	3,900
	3/25/13	<250	<250	<500	<0.5	<0.5	<0.5	<0.5	-	2,800
	9/9/13	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	<0.50	-
	3/3/14	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	<0.50	-
	8/26/14	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	<0.50	-
	3/3/15	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	<0.50	-
	<b>08/19/15</b>	<b>&lt;31.6</b>	<b>191</b>	<b>&lt;82.5</b>	<b>&lt;0.0896</b>	<b>&lt;0.102</b>	<b>&lt;0.158</b>	<b>&lt;0.316</b>	<b>&lt;0.102</b>	<b>-</b>
<b>MW-37</b>	02/16/00	-	-	-	1.06	0.456	0.492	1.78	-	-
	05/30/00	-	-	-	33	0.957	ND	2.1	-	-
dup	05/30/00	-	-	-	31.4	0.775	0.786	1.72	-	-
	08/24/00	-	-	-	40.9	0.731	ND	1.44	-	-
<b>MW-37</b>	11/30/00	-	-	-	10.7	0.594	ND	ND	-	-
	02/21/01	-	-	-	ND	ND	ND	ND	-	-
	05/16/01	-	-	-	0.691	ND	0.740	1.25	-	-
	09/21/01	-	-	-	ND	ND	1.04	1.31	-	-
	09/27/02	-	-	-	ND	ND	ND	ND	-	-
dup	09/27/02	-	-	-	ND	ND	ND	ND	-	-
	03/18/03	-	-	-	ND	ND	ND	ND	-	-
	09/24/03	-	-	-	NS/F	NS/F	NS/F	NS/F	-	-
	09/27/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	03/29/05	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/21/05	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/15/06	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	09/27/06	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/22/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/18/07	-	-	-	<0.400	<0.400	<0.400	<2.00	<1.00	-
	03/25/08	480 <sup>15</sup>	12,000	480 <sup>14</sup>	<0.14	0.27 <sup>14</sup>	<0.13	<0.33	<0.20	-
dup	03/25/08	670 <sup>15</sup>	3,500	130 <sup>14</sup>	<0.14	0.26 <sup>14</sup>	<0.13	0.11 <sup>14</sup>	<0.20	-
	06/23/08	400	370	33 <sup>14</sup>	0.12 <sup>14</sup>	0.22 <sup>14</sup>	<0.042	0.47 <sup>14</sup>	<0.12	-
	09/23/08	670	3,500	69	<0.50	0.050	<0.50	0.24	<0.50	5,600
dup	09/23/08	550	3,700	63	<0.50	0.060	<0.50	0.36	<0.50	5,500
	01/05/09	128 <sup>11</sup>	3,780	<490	<0.200	<1.00	<1.00	<1.00	<1.00	3,740
	03/16/09	-	-	-	<0.200	<1.00	<1.00	<3.00	<1.00	-
	09/14/09	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	03/16/10	-	-	-	<0.200	<1.00	<1.00	<3.00	<1.00	-
dup	03/16/10	-	-	-	<0.200	<1.00	<1.00	<3.00	<1.00	-
	09/20/10	-	-	-	<0.200	<1.00	<1.00	<3.00	<1.00	-
dup	09/20/10	-	-	-	<0.200	<1.00	<1.00	<3.00	<1.00	-
	03/21/11	-	-	-	<0.50	<0.50	<0.50	<1.5	<0.50	-
dup	03/21/11	-	-	-	<0.50	<0.50	<0.50	<1.5	<0.50	-
	09/27/11	<250	2,400	<500	<0.50	<0.50	<0.50	<0.50	-	-
dup	09/27/11	<250	670	<500	<0.50	<0.50	<0.50	<0.50	-	-
	03/26/12	<250	610	<500	<0.50	<0.50	<0.50	<0.50	-	-
dup	03/26/12	<250	410	<500	<0.50	<0.50	<0.50	<0.50	-	-
	09/24/12	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	-	5,800
dup	09/24/12	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	-	5,400
	03/25/13	<250	<250	<500	<0.5	<0.5	<0.5	<0.5	-	4,600
dup	03/25/13	<250	<250	<500	<0.5	<0.5	<0.5	<0.5	-	4,900
	9/9/13	<250	390	<500	<0.50	<0.50	<0.50	<0.50	<0.50	-
dup	9/9/13	<250	440	<500	<0.50	<0.50	<0.50	<0.50	<0.50	-
	3/3/14	<250	450	<500	<0.50	<0.50	<0.50	<0.50	<0.50	-
	8/26/14	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	<0.50	-
dup	8/26/14	<250	260	<500	<0.50	<0.50	<0.50	<0.50	<0.50	-
	3/3/15	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	<0.50	-
dup	3/3/15	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	<0.50	-
	<b>08/19/15</b>	<b>&lt;31.6</b>	<b>758</b>	<b>91.9 J</b>	<b>&lt;0.0896</b>	<b>&lt;0.102</b>	<b>&lt;0.158</b>	<b>&lt;0.316</b>	<b>&lt;0.102</b>	<b>-</b>
<b>MW-40</b>	02/16/00	-	-	-	ND	0.424	0.492	0.759	-	-
	05/30/00	-	-	-	ND	ND	ND	ND	-	-
	08/24/00	-	-	-	ND	ND	ND	ND	-	-
	11/30/00	-	-	-	ND	ND	ND	ND	-	-
	02/21/01	-	-	-	ND	ND	ND	ND	-	-
	05/16/01	-	-	-	ND	ND	0.505	ND	-	-

**TABLE 2**  
**GROUNDWATER ANALYTICAL RESULTS - TPH, BTEX, AND MTBE COMPOUNDS**  
 Willbridge Terminals  
 Portland, Oregon

Well/Sample Identification	Date Sampled	TPH-G (µg/L)	TPH-D (µg/L)	TPH-O (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes <sup>T</sup> (µg/L)	MTBE (µg/L)	TOC (µg/L)
	09/21/01	-	-	-	ND	ND	ND	ND	-	-
	03/13/02	-	-	-	ND	ND	ND	ND	-	-
	09/27/02	-	-	-	ND	ND	ND	ND	-	-
	03/18/03	-	-	-	ND	ND	ND	ND	-	-
	09/24/03	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
dup	09/24/03	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	03/29/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
dup	03/29/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	09/27/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	03/29/05	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/21/05	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/15/06	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	03/22/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
<b>MW-40</b>	09/18/07	-	-	-	<0.400	<0.400	<0.400	<2.00	<1.00	-
	03/25/08	48 <sup>14</sup>	14 <sup>14</sup>	46 <sup>14</sup>	<0.14	<0.11	<0.13	<0.33	<0.20	-
	09/23/08	53	21	64	<0.50	<0.50	<0.50	0.13	0.17	-
	03/16/09	-	-	-	<0.200	<1.00	<1.00	<3.00	<1.00	-
	09/14/09	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	03/16/10	-	-	-	<0.200	<1.00	<1.00	<3.00	<1.00	-
	09/20/10	-	-	-	<0.200	<1.00	<1.00	<3.00	<1.00	-
	03/21/11	-	-	-	<0.50	<0.50	<0.50	<1.5	<0.50	-
	09/27/11	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	-	-
	03/26/12	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	-	-
	9/24/12	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	-	5,800
	3/25/13	<250	<250	<500	<0.5	<0.5	<0.5	<0.5	-	3,400
	9/9/13	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	<0.50	-
	3/3/14	<250	<250	<500	<0.5	<0.5	<0.5	<0.5	<0.5	-
	8/26/14	<250	<250	<500	<0.5	<0.5	<0.5	<0.5	<0.5	-
	3/3/15	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	<0.50	-
	08/19/15	<31.6	285	294	<0.0896	<0.102	<0.158	<0.316	<0.102	-
<b>PHILLIPS</b>										
<b>B-4</b>	05/26/00	-	-	-	82.3	12.7	4	14.8	-	-
dup	05/26/00	-	-	-	74.8	10.7	2.77	10.3	-	-
	08/23/00	-	-	-	NS/F	NS/F	NS/F	NS/F	-	-
	11/29/00	-	-	-	7.04	5.81	2.10	8.09	-	-
	02/20/01	-	-	-	NS/F	NS/F	NS/F	NS/F	-	-
	05/17/01	-	-	-	NS/F	NS/F	NS/F	NS/F	-	-
	09/26/02	-	-	-	16.5	8.36	5.14	27.6	-	-
	09/25/03	-	-	-	48.1	7.55	6.02	17.9	-	-
	03/28/05	-	-	-	-	-	-	-	<2.00	-
	09/26/06	-	-	-	25.6	5.03	<0.500	6.46	<2.00	-
	03/21/07	-	-	-	43.2	5.10	1.33	7.02	<2.00	-
	09/20/07	-	-	-	2.65	2.59	<0.500	4.46	<2.00	-
	03/26/08	2,830 <sup>11</sup>	31,700 <sup>5</sup>	<490	2.66	3.54	<1.00	4.90	<4.00	-
	09/24/08	943	30,800	566	0.900	2.98	<1.00	3.04	<1.00	-
dup	09/24/08	1,350	5,730	<481	1.72	4.62	<1.00	7.13	<1.00	-
	<b>09/21/15</b>	<b>520</b>	<b>2,800</b>	<b>&lt;3,000</b>	<b>&lt;2.0</b>	<b>&lt;2.0</b>	<b>&lt;3.0</b>	<b>&lt;5.0</b>	<b>&lt;1.00</b>	-
<b>B-35</b>	02/17/00	-	-	-	31.6	13.5	11	27.4	-	-
	05/26/00	-	-	-	194	16.3	12.5	39.8	-	-
	08/28/00	-	-	-	287	15.3	8.42	ND	-	-
	11/29/00	-	-	-	384	17.0	12.0	30.2	-	-
	02/23/01	-	-	-	45.6	4.87	12.4	20.5	-	-
	05/17/01	-	-	-	15.2	4.32	5.62	7.99	-	-
	09/20/01	-	-	-	58.0	3.31	9.78	15.9	-	-
	03/14/02	-	-	-	34.1	15.8	2.41	11.4	-	-
	09/26/02	-	-	-	95.8	11.3	14.0	26.3	-	-
	03/18/03	-	-	-	8.11	6.39	1.42	3.20	-	-
	09/25/03	-	-	-	66.7	7.41	3.74	19.2	-	-
	03/30/04	-	-	-	15.1	1.39	6.49	13.0	-	-
	09/28/04	-	-	-	93.4	11.7	<5.00	19.7	-	-
	03/28/05	-	-	-	3.71	6.72	0.660	10.5	7.20	-
	09/20/05	-	-	-	82.0	10.4	1.79	12.2	6.48	-
	03/14/06	-	-	-	18.8	7.31	1.32	10.9	-	-

**TABLE 2**  
**GROUNDWATER ANALYTICAL RESULTS - TPH, BTEX, AND MTBE COMPOUNDS**

Willbridge Terminals  
Portland, Oregon

Well/Sample Identification	Date Sampled	TPH-G (µg/L)	TPH-D (µg/L)	TPH-O (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes <sup>T</sup> (µg/L)	MTBE (µg/L)	TOC (µg/L)
	09/26/06	-	-	-	20.9	7.63	2.45	10.2	<2.00	-
	03/20/07	-	-	-	11.4	5.16	1.02	11.2	<2.00	-
	09/20/07	-	-	-	3.44	6.55	<0.500	10.1	<2.00	-
	03/27/08	1,120	88,300 <sup>5</sup>	2,910 <sup>12</sup>	1.65	3.00	<2.50	5.15	<10.0	-
	09/24/08	1,720	21,300	868	3.48	6.72	<2.00	10.68	<2.00	-
	03/23/09	1,240	21,700	1,110	2.44	6.88	<1.00	9.83	<1.00	-
	09/18/09	1,110	16,200	871	2.80	7.38	<1.00	9.84	<1.00	-
dup	09/18/09	1,110	6,960	<490	2.76	6.86	<2.00	5.90	<2.00	-
	03/31/10	1,290	32,600	1,510	2.40	6.32	<2.00	6.12	<2.00	-
	03/24/11	1,650	3,920	<476	5.37	3.84	<1.00	9.38	<1.00	-
dup	03/24/11	1,670	6,590	<472	5.56	4.00	<1.00	9.96	<1.00	-
	09/27/11	1,560	19,900	1,110	6.68	3.99	<1.00	8.03	<1.00	-
	03/28/12	1,500	11,000 B	670	3.5	4.7	0.51 J	8.3	0.21 J	-
	10/2/12	1,300	6,700	650	12	6.4	<2.0	9.2	<2.0	-
	4/2/13	2,300	3,300	<520	6.3	5.8	<1.0	10	<1.0	-
<b>B-35</b>	9/12/13	1,800	1,500	<260	2.6	5.6	<0.50	8.2	<1.0	-
	3/10/14	1,700	4,200	340	1.4	5.6	<1.0	9.6	<2.0	-
	9/8/14	1,200	8,200	730	3.8	4.3	<1.0	5.9	<2.0	-
dup	9/8/14	1,200	17,000	1,500	3.6	4.0	<1.0	5.9	<2.0	-
	3/10/15	1,400	6,400	1,600	4.4	3.7	<3.0*	5.8	<1.0*	-
	<b>9/17/15</b>	<b>1,500</b>	<b>6,800</b>	<b>&lt;1,400</b>	<b>&lt;2.0</b>	<b>4.3</b>	<b>&lt;3.0</b>	<b>&lt;5.0</b>	<b>&lt;1.0</b>	-
<b>B-36</b>	02/17/00	-	-	-	0.925	1.16	0.762	3.16	-	-
	05/26/00	-	-	-	ND	0.82	0.502	ND	-	-
	08/28/00	-	-	-	2.08	2.54	0.693	2.53	-	-
	11/29/00	-	-	-	1.14	2.53	1.02	2.78	-	-
	02/23/01	-	-	-	ND	0.512	1.15	1.44	-	-
	05/17/01	-	-	-	ND	0.545	0.819	1.8	-	-
	09/20/01	-	-	-	ND	0.609	0.761	1.50	-	-
dup	09/20/01	-	-	-	ND	0.547	0.820	1.51	-	-
	03/14/02	-	-	-	ND	ND	ND	ND	-	-
	09/26/02	-	-	-	1.18	1.33	0.635	2.48	-	-
	03/18/03	-	-	-	ND	ND	ND	ND	-	-
	09/25/03	-	-	-	0.940	1.10	0.954	2.90	-	-
	03/30/04	-	-	-	<0.500	<0.500	<0.500	1.23	-	-
	09/28/04	-	-	-	0.614	0.679	<0.500	<1.00	-	-
	03/28/05	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/20/05	-	-	-	0.390	0.930	<0.500	<1.00	2.63	-
	03/14/06	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	09/26/06	-	-	-	0.760	1.18	<0.500	1.57	3.50	-
	03/20/07	-	-	-	0.610	0.500	<0.500	1.37	<2.00	-
	09/20/07	-	-	-	1.32	1.67	<0.500	1.72	3.47	-
	03/27/08	227	469 <sup>3</sup>	<476	<0.400	<1.00	<1.00	<2.00	<4.00	-
	09/24/08	947	632	<485	0.480	<2.00	<2.00	<6.00	<2.00	-
	03/23/09	<80.0	<248	<495	<0.200	<1.00	<1.00	<3.00	<1.00	-
dup	03/23/09	102	<248	<495	<0.200	<1.00	<1.00	<3.00	<1.00	-
	09/18/09	885	704	<490	0.53	1.23	<1.00	<3.00	<1.00	-
	03/31/10	<80.0	<245	<490	<0.200	<1.00	<1.00	<3.00	<1.00	-
	09/23/10	995	299	<0.500	0.380	<1.00	<1.00	<3.00	1.04	-
dup	09/23/10	950	465	<490	0.410	<1.00	<1.00	<3.00	<1.00	-
	03/24/11	<80.0	<100	<500	<0.200	<1.00	<1.00	<3.00	<1.00	-
	09/27/11	805	459	<500	<0.200	<1.00	<1.00	<3.00	<1.00	-
	03/28/12	<33	130 B	<40	<0.060	<0.090	<0.080	<0.31	<0.090	-
dup	03/28/12	35 J	100 J B	<42	<0.060	<0.090	<0.080	<0.31	<0.090	-
	10/02/12	360	5400	<500	<1.0	<1.0	<1.0	<3.0	<1.0	-
dup	10/2/12	340	5,500	<480	<1.0	<1.0	<1.0	<3.0	<1.0	-
	4/2/13	310	1,100	<520	<1.0	<1.0	<1.0	<3.0	<1.0	-
	9/12/13	420	180	<240	<0.20	<0.50	<0.50	<1.0	<1.0	-
	9/12/13	420	180	<240	<0.20	<0.50	<0.50	<1.0	<1.0	-
	3/13/14	57	960	<260	<0.20	<0.50	<0.50	<1.0	<1.0	-
	9/8/14	1,700	10,000	730	0.86	1.3	<1.0	<2.0	<2.0	-
	3/10/15	210	3,600	1,500	<2.0	<2.0	<3.0	<5.0	<1.0	-
dup	3/10/15	240	3,500	1,400	<2.0	<2.0	<3.0	<5.0	<1.0	-
	<b>9/17/15</b>	<b>360</b>	<b>10,000</b>	<b>2,200</b>	<b>&lt;2.0</b>	<b>&lt;2.0</b>	<b>&lt;2.0</b>	<b>&lt;5.0</b>	<b>&lt;1.0</b>	-

**TABLE 2**  
**GROUNDWATER ANALYTICAL RESULTS - TPH, BTEX, AND MTBE COMPOUNDS**  
 Willbridge Terminals  
 Portland, Oregon

Well/Sample	Date	TPH-G (µg/L)	TPH-D (µg/L)	TPH-O (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes <sup>T</sup> (µg/L)	MTBE (µg/L)	TOC (µg/L)
Identification	Sampled									
<b>B-37</b>	02/17/00	-	-	-	ND	0.517	0.63	1.18	-	-
dup	02/17/00	-	-	-	0.342	1.06	0.795	1.97	-	-
	05/26/00	-	-	-	ND	ND	ND	ND	-	-
	08/28/00	-	-	-	ND	ND	ND	ND	-	-
	11/29/00	-	-	-	ND	ND	ND	ND	-	-
	02/23/01	-	-	-	ND	ND	ND	ND	-	-
	05/17/01	-	-	-	ND	ND	ND	ND	-	-
	03/14/02	-	-	-	ND	ND	ND	ND	-	-
	09/26/02	-	-	-	ND	ND	ND	ND	-	-
	03/18/03	-	-	-	ND	ND	ND	ND	-	-
dup	03/18/03	-	-	-	ND	ND	ND	ND	-	-
	09/25/03	-	-	-	<0.500	<0.500	0.639	1.30	-	-
dup	09/25/03	-	-	-	<0.500	<0.500	0.628	1.24	-	-
	03/31/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	09/28/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
<b>B-37</b>	03/28/05	-	-	-	<0.200	<0.500	<0.500	<1.00	3.98	-
	09/20/05	-	-	-	<0.200	<0.500	<0.500	<1.00	6.14	-
<b>B-37</b>	09/20/05	-	-	-	-	-	-	-	5.82	-
	03/14/06	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
dup	03/14/06	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	09/26/06	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/20/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/20/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/27/08	147 <sup>11</sup>	<240	<481	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/24/08	188	<243	<485	<0.200	<1.00	<1.00	<3.00	<1.00	-
	03/20/09	156	<243	<485	<0.200	<1.00	<1.00	<3.00	<1.00	-
dup	03/20/09	145	<243	<485	<0.200	<1.00	<1.00	<3.00	<1.00	-
	09/18/09	107	<248	<495	<0.200	<1.00	<1.00	<3.00	<1.00	-
	03/31/10	150	<243	<485	<0.200	<1.00	<1.00	<3.00	<1.00	-
dup	03/31/10	126	<250	<500	<0.200	<1.00	<1.00	<3.00	<1.00	-
	09/23/10	161	<100	<500	<0.200	<1.00	<1.00	<3.00	<1.00	-
	03/24/11	<80.0	<94.3	<472	<0.200	<1.00	<1.00	<3.00	<1.00	-
	09/28/11	151	<105	<526	<0.200	<1.00	<1.00	<3.00	<1.00	-
	03/28/12	<33	52 J B	<40	<0.060	<0.080	<0.31	<0.090	-	-
<b>B-40</b>	02/17/00	-	-	-	NS/S	NS/S	NS/S	NS/S	-	-
	05/26/00	-	-	-	NS/F	NS/F	NS/F	NS/F	-	-
	08/28/00	-	-	-	NS/F	NS/F	NS/F	NS/F	-	-
	11/29/00	-	-	-	NS/F	NS/F	NS/F	NS/F	-	-
	02/20/01	-	-	-	NS/F	NS/F	NS/F	NS/F	-	-
	05/17/01	-	-	-	NS/F	NS/F	NS/F	NS/F	-	-
	09/26/06	-	-	-	21.5	2.94	89.4	225	<4.00	-
	03/20/07	-	-	-	15.2	2.74	86	213	<4.00	-
	09/20/07	-	-	-	15.9	2.12	63.6	153	<2.00	-
	3/26/08	2,860	37,600 <sup>3</sup>	5,700	3.4	1.85	61.6	132	<2.00	-
	9/17/13	3,100	74,000	21,000	<0.20	1	10	17	<1.0	-
	9/8/14	2,300	48,000	12,000	<0.40	<1.0	7.3	12	<2.0	-
	3/12/15	1,400	6,900	2,900	<2.0	<2.0	<3.0	5.9	<1.0	-
	<b>9/17/15</b>	<b>3,200</b>	<b>16,000</b>	<b>3,900</b>	<b>&lt;2.0</b>	<b>&lt;2.0</b>	<b>5.7</b>	<b>&lt;11.8</b>	<b>&lt;1.0</b>	-
<b>OF-1</b>	03/26/08	953 <sup>11</sup>	6,920 <sup>5</sup>	<490	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/18/09	82.8	44,400	985	<0.200	<1.00	<1.00	<3.00	<1.00	-
	03/31/10	<80.0	11,300	<500	<0.200	<1.00	<1.00	<3.00	<1.00	-
	09/23/10	<80.0	7,620	<485	<0.200	<1.00	<1.00	<3.00	<1.00	-
	03/24/11	<80.0	<94.3	<472	<0.200	<1.00	<1.00	<3.00	<1.00	-
	09/28/11	<80.0	1,270	<526	<0.200	<1.00	<1.00	<3.00	<1.00	-
<b>P-1</b>	03/17/03	-	-	-	ND	ND	ND	ND	-	-
	03/31/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	09/28/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	03/28/05	-	-	-	-	-	-	-	<2.00	-
	03/14/06	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	09/26/06	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/20/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/20/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-

Well Abandoned

**TABLE 2**  
**GROUNDWATER ANALYTICAL RESULTS - TPH, BTEX, AND MTBE COMPOUNDS**  
 Willbridge Terminals  
 Portland, Oregon

Well/Sample	Date	TPH-G	TPH-D	TPH-O	Benzene	Toluene	Ethylbenzene	Xylenes <sup>T</sup>	MTBE	TOC
Identification	Sampled	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
P-1A	01/28/08	<80.0	<238	<476	0.990	0.590	<0.500	<1.00	<2.00	-
	03/26/08	<80.0	<245	<490	0.240	<0.500	<0.500	<1.00	<2.00	-
	06/25/08	<80.0	<236	<472	1.99	1.32	<0.500	<1.00	<2.00	-
	09/23/08	<80.0	<243	<485	1.87	<1.00	<1.00	<3.00	<1.00	-
	01/07/09	<80.0	<250	<500	<0.200	<1.00	<1.00	<3.00	<1.00	-
	03/20/09	<80.0	<250	<500	<0.200	<1.00	<1.00	<3.00	<1.00	-
	09/18/09	<80.0	<248	<495	0.320	<1.00	<1.00	<3.00	<1.00	-
	03/31/10	<80.0	<240	<481	<0.200	<1.00	<1.00	<3.00	<1.00	-
	09/23/10	<80.0	<98	<490	<0.200	<1.00	<1.00	<3.00	<1.00	-
	03/24/11	<80.0	672	<472	<0.200	<1.00	<1.00	<3.00	<1.00	-
	09/27/11	<80.0	<125	<625	<0.200	<1.00	<1.00	<3.00	<1.00	-
dup	09/27/11	<80.0	<111	<556	<0.200	<1.00	<1.00	<3.00	<1.00	-
	03/28/12	<33	<30	<40	<0.060	<0.090	<0.080	<0.31	<0.090	-
	10/04/2012	<80	280	<480	<1.0	<1.0	<1.0	<3.0	<1.0 *	-
dup	10/05/2012	<80	340	<480	<1.0	<1.0	<1.0	<3.0	<1.0 *	-
	04/03/13	<80	<110	<540	<1.0	<1.0	<1.0	<3.0	<1.0	-
dup	4/3/13	<80	<100	<510	<1.0	<1.0	<1.0	<3.0	<1.0	-
	9/12/13	<80	150	<250	0.99	<0.50	<0.50	<1.0	<1.0	-
P-1A	3/13/14	<50	230	340	<0.20	<0.50	<0.50	<1.0	<1.0	-
dup	3/13/14	<50	170	<270	<0.20	<0.50	<0.50	<1.0	<1.0	-
	9/3/14	<50	260	<260	0.36	<0.50	<0.50	<1.0	<1.0	-
dup	9/3/14	<50	140	<260	0.49	<0.50	<0.50	<1.0	<1.0	-
	3/11/15	<100	220	<280	<2.0	<2.0	<3.0	<5.0	<1.0	-
dup	3/11/15	<100	150	<290	<2.0*	<2.0*	<3.0*	<5.0*	<1.0*	-
U-2	02/17/00	-	-	-	3.13	1.93	3.59	3.43	-	-
	05/26/00	-	-	-	0.885	1.45	ND	ND	-	-
	08/28/00	-	-	-	ND	ND	0.604	ND	-	-
	11/29/00	-	-	-	ND	ND	ND	ND	-	-
	02/23/01	-	-	-	ND	ND	ND	ND	-	-
	05/17/01	-	-	-	ND	ND	ND	ND	-	-
	09/20/01	-	-	-	ND	ND	ND	ND	-	-
	03/14/02	-	-	-	0.986	1.60	0.905	ND	-	-
	09/26/02	-	-	-	ND	ND	ND	ND	-	-
	03/18/03	-	-	-	ND	ND	ND	ND	-	-
	09/25/03	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	03/31/04	-	-	-	2.60	<0.500	0.820	<1.00	-	-
	09/28/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-
	03/28/05	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/20/05	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/14/06	-	-	-	4.71	<0.500	3.19	1.05	-	-
	09/27/06	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/20/07	-	-	-	4.05	<0.500	1.10	<1.00	<2.00	-
	09/19/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/25/08	1,010	673 <sup>3</sup>	<476	8.15	0.630	1.88	<1.00	<2.00	-
	09/25/08	<80.0 <sup>16</sup>	<243	<485	<0.200	<1.00	<1.00	<3.00	<1.00	-
	03/17/09	970	399	<485	5.08	<1.00	<1.00	<3.00	<1.00	-
	09/21/09	112	42 <sup>14</sup>	240 <sup>14</sup>	0.25 <sup>14</sup>	<1.0	<1.0	<3.0	<1.0	-
	03/16/10	96.8	<75	<380	0.42 <sup>14</sup>	<1.0	<1.0	<3.0	<1.0	-
	09/20/10	98.8 <sup>14,19</sup>	<35.1	<57.8	2.5	0.27 <sup>14</sup>	<0.20	<0.42	<0.16	4,100
	03/22/11	538	62.7 <sup>14</sup>	<58.1	1.7	<0.21	0.35 <sup>14</sup>	<0.42	<0.16	1,700
	09/30/11	3,430	187	<192	17.6	0.80J	7.9	4.9	<0.050	4,300
	03/30/12	1,100	430 B	<40	4.3	0.38 J	0.37 J	0.62 J	<0.18	-
	03/18/15	230	550 <sup>24</sup>	330 <sup>24</sup>	<2.0	<2.0	<3.0	<5.0	<1.0	-
	<b>09/17/15</b>	<b>340</b>	<b>390</b>	<b>&lt;300</b>	<b>&lt;2.0</b>	<b>&lt;2.0</b>	<b>&lt;3.0</b>	<b>&lt;5.0</b>	<b>&lt;1.0</b>	-
U-4	03/13/15	360	13,000	1,800	<2.0	<2.0	<3.0	<5.0	<1.0	-
U-5	02/17/00	-	-	-	3.86	0.654	0.501	2.54	-	-
	05/26/00	-	-	-	3.49	ND	ND	ND	-	-
	08/28/00	-	-	-	ND	ND	ND	ND	-	-
	11/29/00	-	-	-	ND	ND	ND	ND	-	-
	02/23/01	-	-	-	1.56	1.16	ND	ND	-	-
	05/17/01	-	-	-	NS/F	NS/F	NS/F	NS/F	-	-
	03/18/03	-	-	-	2.49	2.21	5.77	33.7	-	-
	09/25/03	-	-	-	2.39	1.71	7.89	7.66	-	-

**TABLE 2**  
**GROUNDWATER ANALYTICAL RESULTS - TPH, BTEX, AND MTBE COMPOUNDS**  
 Willbridge Terminals  
 Portland, Oregon

Well/Sample Identification	Date Sampled	TPH-G (µg/L)	TPH-D (µg/L)	TPH-O (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes <sup>T</sup> (µg/L)	MTBE (µg/L)	TOC (µg/L)
	03/31/04	-	-	-	1.53	<0.500	<0.500	<1.00	-	-
	09/28/04	-	-	-	<0.500	0.806	<0.500	1.80	-	-
	03/28/05	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/20/05	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/14/06	-	-	-	0.560	<0.500	<0.500	<1.00	-	-
	09/26/06	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/20/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/20/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/24/08	652	26,700	3,870	<0.200	<1.00	<1.00	<3.00	<1.00	-
	3/19/09	NS	NS	NS	NS	NS	NS	NS	NS	NS
	4/3/13	490	-	-	<1.0	<1.0	<1.0	<3.0	<1.0	-
U-13	09/28/04	-	-	-	39.7	6.2	14.3	11.3	-	-
	03/30/12	6,100	23,000 B	270 J	<1.2	<1.8	150	6.8 J	<1.8	-
U-14	09/27/06	-	3,980 <sup>1</sup>	<526 <sup>1</sup>	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/21/07	<80.0	428 <sup>3</sup>	<500	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/19/07	2,760	1,920 <sup>9</sup>	<500	<1.00 <sup>10</sup>	<2.50 <sup>10</sup>	<2.50 <sup>10</sup>	<5.00 <sup>10</sup>	<10.0 <sup>10</sup>	-
	03/25/08	<80.0	<238	<476	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/25/08	<80.0 <sup>16</sup>	<243	<485	<0.200	<1.00	<1.00	<3.00	<1.00	-
	03/18/09	<80.0	<243	<485	<0.200	<1.00	<1.00	<3.00	<1.00	-
U-14	09/22/09	27.5 <sup>14</sup>	<77	<380	<1.0	<1.0	<1.0	<3.0	<1.0	1,400
	03/16/10	<50	<76	<380	<1.0	<1.0	<1.0	<3.0	<1.0	1,700
	09/21/10	14.6 <sup>14</sup>	<35.2	<58.1	<0.12	<0.21	<0.20	<0.42	<0.16	1,700
	03/22/11	<6.9	<35.1	<57.8	<0.12	<0.21	<0.20	<0.42	<0.16	-
	09/28/11	20.4 <sup>14</sup>	43	<190	0.028 <sup>14</sup>	0.027 <sup>14</sup>	<0.070	<0.080	<0.050	-
	04/02/12	<33	<30	<40	<0.060	<0.090	<0.080	<0.31	<0.090	-
	10/02/12	<80	120	<480	<1.0	<1.0	<1.0	<3.0	<1.0	-
U-15	09/27/06	-	466	<485	7.01	<0.500	1.38	<1.00	<2.00	-
	03/21/07	<80.0	465 <sup>4</sup>	<490	0.560	<0.500	<0.500	<1.00	<2.00	-
	09/19/07	88.7	377 <sup>4</sup>	<500	1.72	<0.500	<0.500	<1.00	<2.00	-
	03/25/08	132	<238	<476	1.47	<0.500	0.600	<1.00	<2.00	-
	09/25/08	<80.0 <sup>16</sup>	<243	<485	0.860	<1.00	1.28	<3.00	<1.00	-
	03/17/09	711	314	5,310	2.26	<1.00	15.9	20.0	<1.00	-
	09/21/09	22.6 <sup>14</sup>	<76	110 <sup>14</sup>	<1.0	<1.0	<1.0	<3.0	<1.0	-
	03/16/10	1,230	<76	<380	8.8	0.38 <sup>14</sup>	75.9	72.9	<1.0	-
	09/20/10	266 <sup>19</sup>	<35.1	<57.8	0.88 <sup>14</sup>	<0.21	6.2	10.5	<0.16	5,200
	03/21/11	2,220	<35.1	<57.8	4.7	0.33 <sup>14</sup>	59	71.2	<0.16	5,300
	09/27/11	35.9 <sup>14</sup>	<37.9	<190	0.13 <sup>14</sup>	0.032 <sup>14</sup>	0.98 <sup>14</sup>	1.9 <sup>14</sup>	0.062 <sup>14</sup>	4,100
	03/30/12	33 J	74 J B	520	<0.060	<0.090	<0.080	<0.31	<0.090	-
dup	03/30/12	34 J	37 J B	78 J	<0.060	<0.090	<0.080	<0.31	<0.090	-
	09/27/2012	<80	220	<480	<1.0	<1.0	<1.0	<3.0	<1.0	-
U-16	09/27/06	-	2,530	<500	0.440	<0.500	5.43	<1.00	<2.00	-
	03/21/07	277	3,630 <sup>5</sup>	860 <sup>6</sup>	0.220	<0.500	0.930	<1.00	<2.00	-
	09/19/07	456	2,800 <sup>5</sup>	590	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/25/08	308	1,410 <sup>3</sup>	<476	<0.200	<0.500	<0.500	<1.00	<2.00	-
	09/25/08	642 <sup>16</sup>	2,230	<485	0.620	<2.00	<2.00	<6.00	<2.00	-
	03/17/09	657	2,280	497	0.640	<2.00	<2.00	<6.00	<2.00	-
	09/21/09	1,030	330	100 <sup>14</sup>	0.56 <sup>14</sup>	0.36 <sup>14</sup>	0.46 <sup>14</sup>	0.78 <sup>14</sup>	0.53 <sup>14</sup>	-
	03/16/10	662	160	<380	0.34 <sup>14</sup>	0.45 <sup>14</sup>	0.39 <sup>14</sup>	5.3	2	-
	09/20/10	887 <sup>19</sup>	196	<57.8	0.46 <sup>14</sup>	0.54 <sup>14</sup>	0.35 <sup>14</sup>	3.2	0.75 <sup>14</sup>	7,500
	03/21/11	1,480	215	<57.8	0.25 <sup>14</sup>	0.35 <sup>14</sup>	0.30 <sup>14</sup>	0.66 <sup>14</sup>	0.37 <sup>14</sup>	11,300
	09/27/11	1,730	254	<190	0.27 <sup>14,19</sup>	0.61 <sup>14,19</sup>	0.31 <sup>14</sup>	0.85 <sup>14,19</sup>	0.17 <sup>14</sup>	6,100
	03/30/12	470	380 B	41 J	<0.060	0.11 J	0.092 J	<0.31	1.4	-
	09/27/2012	1,100	1700	<500	<1.0	<1.0	<1.0	<3.0	<1.0	-
U-17	09/27/06	-	4,540	<500	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/21/07	305	5,560 <sup>4</sup>	<500	<0.450	<0.500	<0.500	<1.00	<2.00	-
	09/19/07	277	2,810 <sup>5</sup>	<500	<0.200	<0.500	<0.500	<1.00	<2.00	-
	03/25/08	780	941 <sup>3</sup>	<476	0.640	1.26	<1.00	<2.00	<4.00	-
	09/25/08	808 <sup>16</sup>	688	<485	<0.400	<2.00	<2.00	<6.00	<2.00	-
	03/17/09	898	981	<478	<0.400	<2.00	<2.00	<6.00	<2.00	-
	09/21/09	1,200	1,300	170 <sup>14</sup>	0.14 <sup>14</sup>	0.39 <sup>14</sup>	<1.0	0.39 <sup>14</sup>	<1.0	-
	03/16/10	1,090	540	<380	0.20 <sup>14</sup>	0.58 <sup>14</sup>	0.28 <sup>14</sup>	5.5	<1.0	-
	09/20/10	717 <sup>19</sup>	713	<57.8	0.22 <sup>14</sup>	0.55 <sup>14</sup>	1.0	2.7 <sup>14</sup>	0.26 <sup>14</sup>	7,500
	03/21/11	708	838	<57.5	0.18 <sup>14</sup>	0.35 <sup>14</sup>	0.40 <sup>14</sup>	1.4 <sup>14</sup>	0.74 <sup>14</sup>	11,300

**TABLE 2**  
**GROUNDWATER ANALYTICAL RESULTS - TPH, BTEX, AND MTBE COMPOUNDS**

Willbridge Terminals  
Portland, Oregon

Well/Sample Identification	Date Sampled	TPH-G (µg/L)	TPH-D (µg/L)	TPH-O (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes <sup>T</sup> (µg/L)	MTBE (µg/L)	TOC (µg/L)
	09/27/11	1,720	1,320	<190	0.085 <sup>14,19</sup>	0.22 <sup>14,19</sup>	0.36 <sup>14</sup>	0.53 <sup>14,19</sup>	0.45 <sup>14</sup>	6,300
	03/30/12	1,100	100 B	<40	0.12 J	0.31 J	0.090 J	<0.31	<0.090	-
	09/27/2012	530	2900	<480	<1.0	<1.0	<1.0	<3.0	<1.0	-
<b>U-18</b>	03/21/07	207	16,300	6,000	0.210	0.540	<0.500	<1.00	<2.00	-
	09/19/07	517	9,980 <sup>5</sup>	1,860	3.06	0.890	<0.500	1.05	<2.00	-
	03/25/08	239	607 <sup>3</sup>	<476	2.36	0.850	<0.500	<1.00	<2.00	-
	09/25/08	941 <sup>16</sup>	1,540	<485	1.32	2.24	<2.00	<6.00	<2.00	-
	03/17/09	<80.0	<236	<472	<0.400	<2.00	<2.00	<6.00	<2.00	-
	09/22/09	879	5,800	2,300	0.71 <sup>14</sup>	2.1	<1.0	4.1	<1.0	-
	03/16/10	45 <sup>14</sup>	64 <sup>14</sup>	<380	<1.0	<1.0	<1.0	<3.0	<1.0	-
	09/21/10	259	332	<58.7	<0.12	1.1	<0.20	<0.42	<0.16	9,600
	03/21/11	785	673	<57.5	0.089 <sup>14</sup>	0.53 <sup>14</sup>	0.094 <sup>14</sup>	0.44 <sup>14</sup>	<0.050	14,700
	09/28/11	1,150	751	<190	0.076 <sup>14,19</sup>	0.60 <sup>14,19</sup>	0.12 <sup>14</sup>	0.34 <sup>14,19</sup>	<0.050	13,300
	03/30/12	110	140 B	<40	<0.060	0.11 J	<0.080	<0.31	<0.090	-
	09/27/2012	320	5300	560	<1.0	<1.0	<1.0	<3.0	<1.0	-
<b>U-19</b>	03/21/07	2,540	2,020	<490	<0.200	<0.500	0.670	<1.00	9.31	-
	09/19/07	3,160	1,470 <sup>3</sup>	<485	<0.200	<0.500	1.02	<1.00	22.0	-
	03/25/08	1,950	522 <sup>3</sup>	<476	<0.400	<1.00	<1.00	<2.00	<4.00	-
	09/25/08	-	-	-	-	-	-	-	-	-
<b>U-19</b>	04/02/12	86	63 J Z	<42	<0.060	<0.090	<0.080	<0.31	<0.090	-
<b>U-20</b>	03/20/07	561	4,530	561 <sup>8</sup>	<0.200	<0.500	<0.500	<1.00	4.28	-
	09/19/07	512	1,460 <sup>3</sup>	<526	<0.200	<0.500	<0.500	<1.00	6.90	-
	03/25/08	240	631 <sup>3</sup>	<490	<0.200	<0.500	<0.500	<1.00	5.51	-
dup	03/25/08	244	600 <sup>3</sup>	<490	<0.200	<0.500	<0.500	<1.00	5.82	-
	09/25/08	3,600 <sup>16</sup>	1,450	<485	<1.00 <sup>18</sup>	<5.00 <sup>18</sup>	<5.00 <sup>18</sup>	<15.00 <sup>18</sup>	7.80 <sup>18</sup>	-
	03/17/09	295	563	<485	9.88	4.35	3.74	8.26	2.88	-
	09/21/09	328	400	110 <sup>14</sup>	<1.0	<1.0	<1.0	0.21 <sup>14</sup>	4.7	-
	03/16/10	216	230	<380	<1.0	<1.0	<1.0	<3.0	5.3	-
	09/21/10 <sup>20</sup>	279	273	<59.2	<0.12	<0.21	<0.20	<0.42	5.6	5,000
	03/21/11	350	545	<57.8	<0.12	<0.21	<0.20	<0.42	3.7	7,100
	09/28/11	385	290	<200	0.027 <sup>14</sup>	0.014 <sup>14</sup>	<0.070	0.14 <sup>14</sup>	3.4	4,600
	03/29/12	110	98 J	<44	<0.060	<0.090	<0.080	<0.31	1.4	-
	09/27/2012	190	1100	<500	<1.0	<1.0	<1.0	<3.0	2.9	-
<b>U-21</b>	03/20/07	2,060	3,600 <sup>7</sup>	<490	0.270	<0.500	2.50	<1.00	<2.00	-
	09/19/07	2,070	3,050 <sup>3</sup>	<500	<1.00 <sup>10</sup>	<2.50 <sup>10</sup>	3.60	<5.00 <sup>10</sup>	<10.0 <sup>10</sup>	-
	03/26/08	1,230	9453	<490	<1.00 <sup>10</sup>	<2.50 <sup>10</sup>	<2.50 <sup>10</sup>	<5.00 <sup>10</sup>	<10.0 <sup>10</sup>	-
	09/25/08	706 <sup>16</sup>	807	<485	<0.200	<1.00	<1.00	<3.00	5.27	-
	03/17/09	1,810	1,190	<485	<0.200	<1.00	<1.00	<3.00	5.61	-
	09/22/09	3,910	500	89 <sup>14</sup>	0.1714	<1.0	1.2	0.50 <sup>14</sup>	8.2	-
	03/16/10	648	190	<390	<1.0	<1.0	<1.0	<3.0	6.9	-
	09/21/10 <sup>20</sup>	1,430	220	<58.7	<0.12	<0.21	<0.20	<0.42	12.9	10,900
	03/21/11	1,200	348	<57.8	<0.12	<0.21	<0.20	<0.42	4.4	7,700
	09/28/11	3,220	500	<190	0.098 <sup>14,19</sup>	0.13 <sup>14,19</sup>	0.30 <sup>14</sup>	0.31 <sup>14,19</sup>	6.2	6,300
dup	09/28/11	3,860	466	<190	0.12 <sup>14,19</sup>	0.16 <sup>14,19</sup>	0.40 <sup>14</sup>	0.35 <sup>14</sup>	<0.050	6,400
	03/29/12	1,000	360	<40	<0.060	<0.090	0.10 J	<0.31	4	-
	09/27/2012	2,100	2200	<480	<5.0	<5.0	<5.0	<15	6.9	-

**Notes:**

Data collected prior to 4Q11 are presented as they were reported by previous consultants

J = result is less than reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value

B = compound was found in the blank sample

\* = Relative Percent Difference of lab control sample and lab control sample duplicate exceed the control limits

2/00 and 5/00 data from IT Corporation

8/00, 11/00, 2/01 and 5/01 data from KHM Environmental Management, Inc.

NS/F = Not sampled floating product present

NS/S = Not sampled sheen present

µg/L = Micrograms per liter

- = Not analyzed, not applicable

ND = Not detected at or below detection limit

<0.200 = Not detected above the laboratory method reporting limit (MRL) of 0.200 µg/L.

TPH-G = Total petroleum hydrocarbons in the gasoline range

TPH-D = Total petroleum hydrocarbons in the diesel range

TPH-O = Total petroleum hydrocarbons in the heavy oil range

TOC = Total organic carbon

**TABLE 2**  
**GROUNDWATER ANALYTICAL RESULTS - TPH, BTEX, AND MTBE COMPOUNDS**  
 Willbridge Terminals  
 Portland, Oregon

Well/Sample Identification	Date Sampled	TPH-G (µg/L)	TPH-D (µg/L)	TPH-O (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes <sup>T</sup> (µg/L)	MTBE (µg/L)	TOC (µg/L)
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BTEX and MTBE analysis by USEPA Method 8021B or 8260B

TPH-G analysis using Northwest Method NWTPH-Gx

TPH-D and TPH-O analysis using Northwest Method NWTPH-Dx with quick silica gel cleanup.

TOC analysis using EPA Method 415

dup\* = duplicate for B-30 submitted as blind duplicate labeled as B-50

dup\*\* = duplicate for B-30 submitted as blind duplicate labeled as B-31

dup\*\*\* = duplicate for B-30 submitted as blind duplicate labeled as B-99

TB-LB = trip blank

<sup>T</sup> = Xylenes are the sum of m-Xylene & p-Xylene and o-Xylene results for determining compliance.

<sup>1</sup> = The reporting limit for this analyte was raised to compensate for the limited sample quantity available for analysis.

<sup>2</sup> = The reporting limit for this analyte was raised to compensate for the limited sample quantity available for analysis.

<sup>3</sup> = Detected hydrocarbons appear to be due to heavy gas/light diesel range components as well as weathered diesel.

<sup>4</sup> = Detected hydrocarbons in the diesel range do not have a distinct diesel pattern and may be due to heavily weathered diesel or possibly biogenic interference.

<sup>5</sup> = Hydrocarbon pattern most closely resembles weathered diesel.

<sup>6</sup> = The hydrocarbons present are a complex mixture of diesel range and heavy oil range organics.

<sup>7</sup> = Detected hydrocarbons appear to be due to heavy gas/light diesel range components as well as biogenic interference.

<sup>8</sup> = Detected hydrocarbons do not have a pattern and range consistent with typical petroleum products and may be due to biogenic interference.

<sup>9</sup> = Hydrocarbon pattern most closely resembles weathered jet fuel or similar light diesel range product.

<sup>10</sup> = The reporting limit was raised due to sample matrix effects.

<sup>11</sup> = Detected hydrocarbons in the gasoline range appear to be due to overlap of diesel range hydrocarbons.

<sup>12</sup> = Heavy oil range organics present are due to hydrocarbons eluting primarily in the diesel range.

<sup>13</sup> = Isopropylbenzene and n-propylbenzene were detected at concentrations of 8.51 µg/L and 10.9 µg/L, respectively.

<sup>14</sup> = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

<sup>15</sup> = Chromatographic fingerprint resembles a petroleum product, but the elution pattern indicates presence of a greater amount of heavier molecular weight constituents than the calibration standard.

<sup>16</sup> = The sample was analyzed one day past holding time.

<sup>17</sup> = Detected hydrocarbons in the diesel range are primarily due to overlap from a gasoline range product.

<sup>18</sup> = The reporting limit was raised due to high concentrations non-target analytes.

<sup>19</sup> = Analyte was detected in the associated method blank

<sup>20</sup> = Samples U-20 and U-21 were identified incorrectly (labels switched) in the field.

<sup>21</sup> = Reporting limits were increased due to sample foaming.

<sup>22</sup> = TPH-d concentration may include contributions from lighter-end and heavier-end hydrocarbons that elute in the TPH-d range.

<sup>23</sup> = Total Xylene MRL is reported as the sum of the reporting limits for the o-, m-, and p-Xylene isomers.

<sup>24</sup> = The chromatographic response does not resemble a typical fuel pattern.

**TABLE 3**  
**GROUNDWATER ANALYTICAL RESULTS - PAH COMPOUNDS**  
 Willbridge Terminals  
 Portland, Oregon

		1-Methyl-naphthalene	2-Methyl-naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo (a) anthracene	Benzo (a) pyrene	Benzo (b) fluoranthene	Benzo (g,h,i) perylene	Benzo (k) fluoranthene	Chrysene	Dibenz (a,h) anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene		
Identification	Sampled	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)		
Number of benzene rings	-	2	2	2	3	4	5	4	5	4	4	5	3	2	5	2	3	4			
Well	Date																				
<b>CHEVRON</b>																					
B-9	02/18/00	-	-	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F		
	05/23/00	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
	08/25/00	-	-	2.60	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.40	ND	ND	1.33	ND	
	11/30/00	-	-	0.700	ND	0.600	0.460	0.240	0.400	ND	ND	ND	ND	ND	ND	6.70	ND	0.780	0.200	0.160	
	02/22/01	-	-	1.78	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.20	ND	ND	0.528	ND	
	05/17/01	-	-	1.50	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.60	ND	ND	0.386	ND	
	09/19/01	-	-	1.08	0.240	ND	ND	ND	ND	0.120	ND	ND	0.100	ND	ND	4.00	0.100	0.260	0.780	0.100	
	03/21/02	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	09/24/02	-	-	1.40	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.09	ND	ND	0.358	ND	
	03/20/03	-	-	0.242	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.508	ND	ND	ND	ND	
	09/30/03	-	-	1.29	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.38	ND	ND	0.265	ND	
	03/30/04	-	-	0.964	<0.300	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	3.10	<0.200	<1.50	0.951	0.234	
	03/08/05	-	-	0.910	<0.200	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	2.78	<0.100	<0.700	0.679	<0.100	
	06/22/05	-	-	0.887	<0.200	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	3.05	<0.100	<0.500	0.873	<0.100	
	09/21/05	-	-	0.832	<0.198	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	2.93	<0.0990	<0.891	0.702	<0.0990	
	09/26/06	-	-	0.780	<0.150	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	1.99	<0.100	<0.550	0.805	0.226	
	03/22/07	-	-	0.489	<0.146	<0.0976	0.171	0.225	0.328	0.357	0.343	0.389	0.0970	0.519	1.95	0.288	<0.829	0.531	0.610		
B-9A	09/19/07	-	<9.76 <sup>b</sup>	<9.76 <sup>b</sup>	<9.76 <sup>b</sup>	<9.76 <sup>b</sup>	0.341	0.189	0.156	<1.95	0.117	0.498	<0.0976	<9.76 <sup>b</sup>	68.2	0.120	<19.5 <sup>b</sup>	34.1	5.96		
	03/25/08	-	5.39	4.56	<4.95	2.02	0.381	0.290	0.219	<2.48	0.231	0.622	<0.124	1.25	21.2	0.212	<4.95	13.5	<2.48		
	06/24/08	-	3.08	6.25	<2.44	<7.32	0.250	0.219	0.159	<0.488	0.129	0.471	0.0394	<0.976	22.2	0.160	<4.88	21.5	0.967		
	09/23/08	-	1.33	2.72	<0.952 <sup>b</sup>	<1.43 <sup>b</sup>	0.106	0.0750	0.0597	<0.952 <sup>b</sup>	0.0497	0.211	<0.0476 <sup>b</sup>	0.487	12.5	0.0548	<2.86 <sup>b</sup>	7.27	0.496		
dup	09/23/08	-	1.42	2.89	<0.952 <sup>b</sup>	<1.43 <sup>b</sup>	0.130	0.0930	0.0786	<0.952 <sup>b</sup>	0.0620	0.255	<0.0476 <sup>b</sup>	0.570	12.8	0.0644	<2.38 <sup>b</sup>	7.15	0.638		
	01/06/09	-	1.01	2.32	<1.96	<1.96	0.174	0.223	0.272	0.350	0.268	0.368	0.0948	<1.96	10.2	0.296	<3.92	3.44	<1.96		
dup	01/06/09	-	0.682	1.20	<0.485	<0.485	0.0744	0.0876	0.0922	0.128	0.0968	0.147	0.0340	0.290	7.19	0.109	<1.46	2.19	0.435		
	03/24/09	-	0.475	1.70	<0.891	<1.19	0.137	0.138	0.149	<0.297	0.150	0.265	0.0427	0.503	14.4	0.140	<1.34	6.88	0.914		
	09/22/09	-	1.14	2.81	<0.980	<0.980	0.0516	0.0578	0.0499	<0.980	0.0542	0.0954	<0.0490	<0.980	12.0	<0.0490	<1.47	5.73	<0.980		
dup	09/22/09	-	1.79	3.42	<1.46	<0.971	0.0682	0.0779	0.0797	<0.971	0.0761	0.122	<0.0485	<0.971	14.8	0.0633	<1.46	6.39	<0.971		
	03/18/10	-	<1.90	3.08	<1.90	<1.90	0.471	0.450	0.438	<1.90	0.425	0.689	0.127	<1.90	12.6	0.407	<1.90	5.75	<1.90		
	03/29/13	68	<0.53	1.8	<0.53	<0.53	0.20	0.25	0.22	<0.53	0.24	0.35	0.065	0.57	10	0.23	<5.3	3.7	0.79		
	09/16/13	64	<2.2	<2.2	<2.2	<5.4	<0.11	<0.11	<0.11	<2.2	<0.11	<0.11	<0.11	<5.4	9.9	<0.11	<4.3	6.3	<2.2		
	09/10/14	48	<0.54	1.8	<0.54	<0.54	<0.027	<0.027	0.045	<0.54	<0.027	0.042	<0.027	<0.54	6.8	0.027	<0.54	3.8	<0.54		
	03/09/15	70	0.65	2.5	0.55	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	11	<0.11	1.2	3.5	<0.11		
	09/14/15	53	<0.016	1.6	0.46	<0.31*	0.042	0.043*	0.082	<0.012*	0.031	0.069	<0.012	<0.62	6.0	<0.012	0.40	4.4	<0.62		
B-10	02/18/00	-	-	3.58	ND	ND	0.0670	ND	ND	ND	0.14	ND	0.632	11.8	ND	ND	12.9	0.513			
dup	02/18/00	-	-	4.83	ND	2.9	5.47	ND	0.66	ND	ND	0.689	ND	1.95	15.9	ND	ND	23.4	1.85		
	05/23/00	-	-	ND	ND	ND	ND	ND	ND	ND	ND	0.101	ND	ND	11.9	ND	ND	12.7	0.818		
	08/25/00	-	-	1.63	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	3.18	ND	ND	2.91	ND		
	11/30/00	-	-	1.42	ND	0.320	ND	ND	ND	ND	ND	ND	ND	ND	2.24	ND	0.980	0.160	0.120		
	02/23/01	-	-	1.01	ND	0.252	ND	ND	ND	ND	ND	ND	ND	ND	0.234	1.25	ND	ND	1.33	0.225	
	05/17/01	-	-	0.635	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.976	ND	ND	0.521	ND	
	09/19/01	-	-	0.420	ND	ND	ND	ND	ND	ND	0.100	ND	ND	ND	ND	0.200	0.300	0.100	0.360	ND	0.240
	03/21/02	-	-	ND	ND	0.188	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.190	1.23	ND	ND	1.23	0.220
	09/24/02	-	-	1.04	0.132	1.49	ND	ND	0.170	ND	0.189	ND	ND	ND	ND	1.32	ND	0.717	1.34	0.245	
	03/20/03	-	-	1.05	ND	0.190	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.194	1.30	ND	ND	1.27	0.236
	09/29/03	-	-	1.09	ND	0.234	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.463	1.91	ND	ND	2.11	0.436
	03/30/04	-	-	1.65	<0.200	0.671	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.588	5.22	<0.200	<2.40	5.67	0.891	
	03/08/05	-	-	1.41	<0.300	0.638	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.400	0.814	4.46	<0.200	<1.40	2.76	0.829	

**TABLE 3**  
**GROUNDWATER ANALYTICAL RESULTS - PAH COMPOUNDS**

**TABLE 3**  
**GROUNDWATER ANALYTICAL RESULTS - PAH COMPOUNDS**

		1-Methyl-naphthalene	2-Methyl-naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo (a) anthracene	Benzo (a) pyrene	Benzo (b) fluoranthene	Benzo (g,h,i) perylene	Benzo (k) fluoranthene	Chrysene	Dibenzo (a,h) anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene	
	02/23/01	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	05/17/01	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
B-28	09/20/01	-	-	ND	ND	ND	ND	ND	ND	0.100	ND	ND	ND	ND	ND	0.100	ND	ND	ND	
	03/21/02	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	09/24/02	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	03/20/03	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	09/30/03	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.767	ND	ND	
	03/29/04	-	-	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0400	<0.0200	<0.100	<0.0400	<0.0200	
	03/09/05	-	-	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	<0.100	1.18	<0.100	<0.100	<0.100	
	09/21/05	-	-	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.198	<0.0990	<0.0990	0.395	<0.0990	<0.0990	<0.0990	
	03/14/06	-	-	<0.0404	<0.0404	<0.0404	0.0735	0.0823	0.0839	0.105	0.0695	0.111	<0.0404	0.180	<0.0404	0.0734	<0.0404	0.112	0.179	
	09/28/06	-	-	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0294	<0.0196	<0.0196	<0.0196	<0.0196	
	09/18/07	-	<0.0971	<0.0971	<0.0971	<0.0971	<0.00485	<0.00485	0.00584	<0.0971	<0.00485	0.00541	<0.00485	<0.0971	<0.0971	<0.00485	0.130	<0.0971	<0.0971	
	03/25/08	-	<0.0971	<0.0971	<0.0971	<0.0971	0.0132	0.0152	0.0156	<0.194	0.0155	0.0178	<0.0971	<0.0971	<0.0971	0.0154	<0.0971	<0.0971	<0.0971	
	09/23/08	-	<0.0952	<0.0952	<0.0952	<0.0952	<0.00908	0.0101	0.00913	<0.0952	0.00866	0.0124	<0.00476	<0.0952	<0.0952	0.00885	<0.0952	<0.0952	<0.0952	
	03/24/09	-	<0.0971	<0.0971	<0.0971	<0.0971	0.0238	0.0287	0.0360	<0.0971	0.0311	0.0412	0.00832	<0.0971	<0.0971	0.0260	<0.0971	<0.0971	<0.0971	
	09/22/09	-	<0.0980	<0.0980	<0.0980	<0.0980	0.00748	0.0115	0.0103	<0.0980	0.00990	0.0109	<0.0490	<0.0980	<0.0980	0.00892	<0.0980	<0.0980	<0.0980	
	03/19/10	-	<0.0957	<0.0957	<0.0957	<0.0957	0.00733	0.00888	0.00828	<0.0957	0.00714	0.00984	<0.0478	<0.0957	<0.0957	0.00741	<0.0957	<0.0957	<0.0957	
	09/21/10	-	<0.100	<0.100	<0.100	<0.100	0.00750	0.00932	0.00872 <sup>12</sup>	<0.100	0.00638 <sup>12</sup>	0.00833 <sup>12</sup>	<0.00500	<0.100	<0.100	0.00944 <sup>12</sup>	<0.100	<0.100	<0.100	
	03/23/11	-	<0.0952	<0.0952	<0.0952	<0.0952	0.00871	0.0123	0.0121	<0.0952	0.0109	0.0124	<0.00476	<0.0952	<0.0952	0.00972	<0.0952	<0.0952	<0.0952	
	10/03/11	-	<0.0990	<0.0990	<0.0990	<0.0990	0.00507	0.00537	0.00561	<0.0990	0.00527	0.00606	<0.0495	<0.0990	<0.0990	<0.0495	<0.0990	<0.0990	<0.0990	
	04/05/12	<0.048	<0.048	<0.048	<0.048	<0.0048	<0.0048	<0.0048	<0.048	<0.048	<0.0048	<0.048	<0.048	<0.048	<0.048	<0.048	<1.0	<0.048	<0.048	
	10/08/2012	<0.099	<0.099	<0.099	<0.099	<0.099	<0.0049	<0.0049	<0.0049	<0.099	<0.0049	<0.0049	<0.0049	<0.099	<0.099	<0.0049	<0.099	<0.099	<0.099	
	04/01/13	<0.10	<0.10	<0.10	<0.10	<0.10	<0.0052	<0.0052	<0.0052	<0.10	<0.0052	<0.0052	<0.0052	<0.10	<0.10	<0.0052	<0.10	<0.10	<0.10	
	09/18/13	<0.10	<0.10	<0.10	<0.10	<0.10	<0.0050	<0.0050	<0.0050	<0.10	<0.0050	<0.0050	<0.0050	<0.10	<0.10	<0.0050	<0.10	<0.10	<0.10	
	03/18/14	<0.10	<0.10	<0.10	<0.10	<0.0051	<0.0051	<0.0051	<0.10	<0.0051	<0.0051	<0.0051	<0.10	<0.10	<0.0051	<0.10	<0.10	<0.10	<0.10	
	09/10/14	<0.11	<0.11	<0.11	<0.11	<0.0054	<0.0054	<0.0054	<0.11	<0.0054	<0.0054	<0.11	<0.0054	<0.11	<0.11	<0.0054	<0.11	<0.11	<0.11	
	03/09/15	<0.010	<0.013	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	0.026*	<0.010	<0.010	<0.010	<0.010	
	09/08/15	<0.010	<0.013	<0.010	<0.010*	<0.026*	<0.010	<0.010*	0.0046 J	<0.010	0.0015 J	<0.010	<0.051	<0.010	<0.051	<0.010	<0.010	0.011	<0.10	<0.051
B-29	09/20/01	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	03/21/02	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	09/24/02	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	03/20/03	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	09/30/03	-	-	ND	ND	ND	ND	0.121	0.136	0.157	0.114	0.111	ND	0.132	ND	0.123	ND	0.138		
	03/29/04	-	-	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0300	<0.0200	<0.0600	<0.0200	<0.0200		
	03/09/05	-	-	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	<0.100	<0.100	<0.100	<0.100		
	09/21/05	-	-	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.198	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990		
	03/14/06	-	-	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0294	0.0238	
	09/28/06	-	-	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194		
	03/22/07	-	-	<0.00990	<0.00990	<0.00990	<0.00990	<0.00495	<0.00495	0.00524	<0.00990	<0.00495	0.00663	<0.00495	<0.0198	<0.0792	<0.00495	<0.0198	0.126	0.0201
	09/18/07	-	<0.0971	<0.0971	<0.0971	<0.0971	<0.00485	<0.00485	0.00624	<0.0971	0.00561	<0.00485	<0.00485	<0.0971	<0.0971	0.00573	<0.0971	<0.0971	<0.0971	
	03/25/08	-	<0.0980	<0.0980	<0.0980	<0.0980	<0.00490	<0.00490	<0.0490	<0.0980	<0.00490	<0.00490	<0.00490	<0.0980	<0.0980	<0.0490	<0.0980	<0.0980	<0.0980	
	09/23/08	-	<0.0952	<0.0952	<0.0952	<0.0952	<0.00789	0.00553	0.00665	<0.0952	<0.00476	0.0112	<0.00476	<0.0952	<0.0952	<0.0476	<0.0952	<0.0952	<0.0952	
	03/24/09	-	<0.0995	<0.0995	<0.0995	<0.0995	<0.00498	<0.00498	<0.00498	<0.0995	<0.00498	<0.00498	<0.00498	<0.0995	<0.0995	0.00533	<0.0995	<0.0995	<0.0995	
	09/22/09	-	<0.0976	<0.0976	<0.0976	<0.0976	0.0106	0.0141	0.0133	<0.0976	0.0108	0.0137	<0.00488	<0.0976	<0.0976	0.0122	<0.0976	<0.0976	<0.0976	
	03/19/10	-	<0.0962	<0.0962	<0.0962	<0.0962	<0.00829	0.00577	0.00542	<0.0962	<0.00481	0.00991	<0.00481	<0.0962	<0.0962	<0.0481	<0.0962	<0.0962	<0.0962	
	09/21/10	-	<0.100	<0.100	<0.100	<0.100	<0.00500	<0.00500	<0.00500	<0.100	<0.00500	<0.00500	<0.00500	<0.100	<0.100	0.00600 <sup>12</sup>	<0.100	<0.100	<0.100	
	03/23/11	-	<0.0952	<0.0952	<0.0952	<0.0952	<0.00949	0.00866	0.00781	<0.0952	<0.00740	0.0103	<0.00476	<0.0952	<0.0952	0.00570	<0.0952	<0.0952	<0.0952	
	10/03/11	-	<0.0990	<0.0990	<0.0990	<0.0990	<0.00495	<0.00495	<0.00495	<0.0990	<0.00495	<0.00495	<0.00495	<0.0990	<0.0990	<0.0495	<0.0990	<0.0990	<0.0990	
	04/05/12	<0.049	<0.049	<0.049	<0.049	<0.049	<0.0049	0.0059	0.0067	<0.049	<0.0059	0.0073	<0.0049	<0.049	<0.049	0.0064	<1.0	<0.049	<0.049	
	10/08/2012	<0.11	<0.11	<0.11	<0.11	<0.11	<0.0056	<0.0056	<0.0056	<0.11	<0.0056	<0.0056	<0.0056	<0.11	<0.11	<0.056	<0.11	<0.11	<0.11	
	04/01/13	<0.10	<0.10	<0.10	<0.10	<0.10	<0.0051	<0.0051	<0.0051	<0.10	<0.0051	<0.0051	<0.0051	<0.10	<0.10	<0.051	<0.10	<0.10	<0.10	
	09/18/13	<0.10	<0.10	<0.10	<0.10	<0.10	<0.041	<0.0051	<0.0051	<0.10	<0.0051	<0.0051	<0.0051	<0.10	<0.10	<0.051	<0.10	<0.10	<0.10	

**TABLE 3**  
**GROUNDWATER ANALYTICAL RESULTS - PAH COMPOUNDS**  
 Willbridge Terminals  
 Portland, Oregon

		1-Methyl-naphthalene	2-Methyl-naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene		
	03/18/14	<0.10	<0.10	<0.10	<0.10	<0.10	<0.0051	<0.0051	<0.0051	<0.10	<0.0051	<0.0051	<0.0051	<0.10	<0.10	<0.0051	<0.10	<0.10	<0.10		
	09/09/14	<0.11	<0.11	<0.11	<0.11	<0.11	<0.0055	<0.0055	<0.0055	<0.11	<0.0055	<0.0055	<0.0055	<0.11	<0.11	<0.0055	<0.11	<0.11	<0.11		
	03/09/15	<0.0097	<0.013	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097	<0.0097*	<0.0097	<0.0097	<0.0097	<0.0097		
	09/08/15	<b>&lt;0.010</b>	<b>&lt;0.013</b>	<b>&lt;0.010</b>	<b>&lt;0.010*</b>	<b>&lt;0.025*</b>	<b>&lt;0.010</b>	<b>&lt;0.010*</b>	<b>&lt;0.010</b>	<b>&lt;0.010</b>	<b>&lt;0.010</b>	<b>&lt;0.010</b>	<b>&lt;0.010</b>	<b>&lt;0.010</b>	<b>&lt;0.051</b>	<b>&lt;0.010</b>	<b>&lt;0.010</b>	<b>0.046 J</b>	<b>&lt;0.10</b>	<b>&lt;0.051</b>	
<b>B-30</b>	02/18/00	-	-	0.121	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.113	0.177	ND	ND	0.175	0.202	
	05/23/00	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.105	ND	
	08/25/00	-	-	0.385	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.530	ND	ND	0.423	ND		
	11/30/00	-	-	0.280	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.440	ND	0.280	0.300	0.100		
	02/23/01	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
	02/23/01	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
dup**	05/17/01	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.116	ND	ND	0.108	ND		
	09/20/01	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.100	ND	0.100	ND	ND		
dup	09/20/01	-	-	ND	ND	ND	ND	ND	ND	0.100	ND	ND	0.100	ND	ND	0.120	0.100	ND	ND		
dup	03/21/02	-	-	0.162	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.312	ND	ND	0.157	0.114		
dup	03/21/02	-	-	0.162	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.314	ND	ND	0.164	0.123		
	09/24/02	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
	03/20/03	-	-	0.142	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.133	ND	ND	0.132	ND		
dup*	03/20/03	-	-	0.108	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.126	ND	ND	0.105	ND		
	09/30/03	-	-	ND	ND	0.582	0.585	0.421	0.323	0.443	0.531	ND	0.827	0.349	0.272	ND	0.451	1.51			
dup***	09/30/03	-	-	ND	ND	0.473	0.416	0.410	0.291	0.357	0.450	ND	0.728	ND	0.248	ND	0.432	1.26			
	03/29/04	-	-	0.119	<0.0200	0.0449	0.0576	0.0507	0.0420	0.0344	0.0393	0.0633	<0.0200	0.123	0.173	0.0295	<0.320	0.170	0.240		
dup***	03/29/04	-	-	<0.280	<0.800	0.0485	0.0605	0.0596	0.0452	0.0417	0.0438	0.0637	<0.0200	0.112	0.216	0.0361	<0.640	0.170	0.244		
	03/09/05	-	-	0.242	<0.200	<0.200	0.223	0.209	<0.200	<0.200	<0.200	0.217	<0.400	0.400	<0.300	<0.200	<0.400	0.284	0.637		
	09/21/05	-	-	0.103	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	0.198	<0.0990	<0.0990	<0.0990	<0.297	<0.0990	<0.0990	
dup***	09/21/05	-	-	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.248	<0.0990	<0.0990	
	03/14/06	-	-	0.310	<0.142	0.0684	0.0761	0.0628	0.0455	0.0480	0.0368	0.0783	<0.0189	0.152	0.369	0.0353	<0.292	0.260	0.323		
dup	03/14/06	-	-	0.375	<0.182	0.0933	0.106	0.0871	0.0607	0.0674	0.0564	0.109	<0.0404	0.202	0.375	0.0491	<0.404	0.275	0.424		
	09/28/06	-	-	0.157	<0.0891	0.0317	0.0371	0.0391	0.0320	0.0316	0.0216	0.0344	<0.0198	0.0477	0.108	0.0246	<0.297	0.0869	0.133		
	03/22/07	-	-	0.0691	<0.0392	<0.0980	0.0230	0.0222	0.0173	0.0167	0.0193	0.0291	0.00518	0.0242	0.200	0.0134	<0.245	0.201	0.114		
	09/18/07	-	<0.0990	<0.0990	<0.0990	0.00633	<0.00495	0.00528	<0.0990	<0.00495	<0.00735	<0.00495	<0.0990	<0.00495	<0.0990	<0.00495	<0.693 <sup>b</sup>	<0.0990	0.118		
dup	09/18/07	-	<0.0962	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00495	<0.00481	<0.00481	<0.0962	<0.0962	<0.00481	<0.481 <sup>b</sup>	<0.0962	<0.0962		
	09/21/10	-	<0.500	<0.500	<0.500	<0.200	0.256	0.228	0.160 <sup>a</sup>	<0.200	0.155 <sup>a</sup>	0.233 <sup>a</sup>	0.0550	0.465	<0.500	0.160 <sup>a</sup>	<0.500	0.279	0.778		
	03/23/11	-	<0.190	0.312	<0.190	<0.190	0.0545	0.0701	0.0509	<0.190	0.0509	0.0652	0.0154	<0.190	0.332	0.0426	<0.381	<0.190	0.209		
dup	03/23/11	-	<0.476	0.501	<0.476	<0.476	0.178	0.224	0.166	<0.476	0.169	0.204	0.0379	<0.476	0.538	0.122	<0.476	<0.476	0.604		
	10/03/11	-	<0.0962	<0.0962	<0.0962	<0.0962	0.00754	0.0115	0.00896	<0.0962	0.00882	0.0104	<0.00481	<0.0962	0.124	0.00584	<0.192	<0.0962	<0.0962		
dup	10/03/11	-	<0.0980	<0.0980	<0.0980	<0.0980	0.0131	0.0249	0.0189	<0.0980	0.0172	0.0169	<0.00490	<0.0980	0.0134	<0.196	<0.0980	<0.0980			
	04/04/12	0.58	<0.048	0.10	<0.048	<0.048	0.017	0.028	0.043	<0.048	<0.0048	0.023	0.0061	<0.048	0.13	0.020	<1.0	0.066 J	0.061 J		
	10/08/2012	0.13	<0.10	<0.10	<0.10	0.0056	0.0067	0.0059	<0.10	0.0053	0.0072	<0.0050	<0.10	0.0056	<0.10	<0.10	<0.10	<0.10	<0.10		
dup	10/08/2012	<0.11	<0.11	<0.11	<0.11	<0.063	0.0096	0.0081	<0.11	0.0064	0.0073	0.0068	<0.11	<0.11	0.011	<0.11	<0.11	<0.11	<0.11		
	04/01/13	0.15	<0.11	<0.11	<0.11	<0.053	0.0091	0.0074	<0.11	<0.0053	0.0067	<0.0053	<0.11	<0.11	0.018	<0.11	<0.11	<0.11	<0.11		
	09/18/13	0.15	<0.098	<0.098	<0.098	<0.098	<0.0049	0.007	0.0058	<0.098	<0.0049	<0.0049	<0.0049	<0.098	<0.098	<0.0049	<0.098	<0.098	<0.098		
	03/18/14	<0.12	<0.12	<0.12	<0.12	<0.060	<0.060	<0.060	<0.12	<0.060	<0.060	<0.060	<0.12	<0.12	<0.12	<0.060	<0.12	<0.12	<0.12		
	09/09/14	0.12	<0.11	<0.11	<0.11	<0.053	<0.053	<0.053	<0.11	<0.053	<0.053	<0.053	<0.11	<0.11	<0.053	<0.11	<0.11	<0.11	<0.11		
	03/09/15	0.030	<0.013	0.029	<0.0099	<0.0099	<0.0099	<0.0999	<0.0999	<0.0999	<0.0999	<0.0999	<0.0999	<0.0999	<0.0999	0.024	<0.0999	0.033	0.015	0.019	
	09/08/15	<b>0.074</b>	<b>&lt;0.015</b>	<b>0.031</b>	<b>0.0067 J *</b>	<b>0.0079 J *</b>	<b>0.0035 J</b>	<b>0.0033 J *</b>	<b>0.0072 J</b>	<b>0.0034 J</b>	<b>0.0018 J</b>	<b>0.0045 J</b>	<b>&lt;0.011</b>	<b>0.015 J</b>	<b>0.032</b>	<b>&lt;0.011</b>	<b>0.022</b>	<b>&lt;0.11</b>	<b>0.033 J</b>		
<b>CR-1</b>	09/20/01	-	-	0.520	ND	ND	ND	0.120	0.100	0.140	0.100	ND	0.120	ND	1.94	0.140	0.300	0.160	ND		
	03/21/02	-	-	0.216	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.789	ND	ND	0.194	ND		
	09/24/02	-	-	1.40	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.32	ND	0.887	0.660	ND		
	03/20/03	-	-	0.758	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.53	ND	ND	0.748	ND		
	09/30/03	-	-	1.31	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	4.02	ND	ND	1.11	ND		
	03/30/04	-	-	0.473	<0.150	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	1.59	<0.100	<0.650	0.322	<0.100		
	03/08/05	-	-	0.825	<0.150	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	3.18	<0.100	<0.850	0.766	<0.100		
	09/21/05	-	-	1.22	<0.297	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	4.63	<0.0990	<1.63	1.52	<0.0990	</td	

**TABLE 3**  
**GROUNDWATER ANALYTICAL RESULTS - PAH COMPOUNDS**  
 Willbridge Terminals  
 Portland, Oregon

		1-Methyl-naphthalene	2-Methyl-naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benz(a)pyrene	Benz(b)fluoranthene	Benz(g,h,i)perylene	Benz(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene	
	09/27/06	-	-	0.978	<0.197	0.0747	<0.00985	<0.0197	<0.0493	<0.0197	<0.00985	<0.00985	<0.0493	3.19	<0.00985	<0.788	1.07	0.0513		
	03/22/07	-	-	0.118	<0.0343 <sup>6</sup>	<0.0490 <sup>6</sup>	<0.00490	<0.00490	<0.00980	<0.00490	<0.0147 <sup>6</sup>	<0.00490	<0.0245 <sup>6</sup>	0.838	<0.00490	<0.275 <sup>6</sup>	0.140	<0.0784 <sup>6</sup>		
	09/20/07	-	<0.500 <sup>6</sup>	1.01	<0.500 <sup>6</sup>	<0.500 <sup>6</sup>	<0.0250 <sup>6</sup>	0.0112 <sup>4</sup>	0.0146 <sup>4</sup>	<0.100	0.0120 <sup>4</sup>	<0.0250 <sup>6</sup>	0.00524 <sup>4</sup>	<0.500 <sup>6</sup>	9.81	0.00512 <sup>4</sup>	<2.50	1.03	<0.500 <sup>6</sup>	
	03/25/08	-	<0.0980	<0.0980	<0.0980	<0.0245	<0.00490	<0.00490	<0.0980	<0.00490	<0.0245	<0.00490	<0.0980	<0.0980	<0.00490	<0.0980	<0.0980	<0.0980		
	09/24/08	-	<0.0952	0.500	<0.0952	<0.0952	0.00712	0.00625	0.00645	<0.0952	0.00486	0.0145	<0.00476	<0.0952	2.38	0.00599	<0.571 <sup>8</sup>	0.375	<0.0952	
CR-1	03/25/09	-	<0.0971	0.125	<0.0971	<0.0971	0.00665	0.00565	0.00614	<0.0971	0.00595	0.0129	0.00515	<0.0971	0.411	0.00674	<0.0971	<0.0971	<0.0971	
	09/22/09	-	<0.0962	0.619	<0.0962	<0.0962	0.0161	0.0183	0.0150	<0.0962	0.0134	0.0245	<0.00481	<0.0962	2.53	0.0119	<0.240	0.448	<0.0962	
	03/19/10	-	<0.0962	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<0.00721	<0.00481	<0.0962	0.182	<0.00481	<0.0962	<0.0962	<0.0962	
dup	03/19/10	-	<0.0980	0.105	<0.0980	<0.0980	<0.00490	<0.00490	<0.00490	<0.0980	<0.00490	<0.00735	<0.00490	<0.0980	0.390	<0.00490	<0.0980	<0.0980	<0.0980	
	09/22/10	-	<0.200	0.782	<0.300	<0.250	0.0130	0.00592	<0.0100	<0.100	<0.00500	0.0344 <sup>9</sup>	0.00525	<0.100	2.62	0.00670 <sup>12</sup>	<0.300	1.19	<0.100	
	03/24/11	-	<0.0952	0.180	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	0.584	<0.00476	<0.0952	0.0981	<0.0952	
	10/05/11	-	<0.0990	0.353	<0.0990	<0.0990	<0.00495	<0.00495	<0.00495	<0.0990	<0.00495	<0.00990	<0.00495	<0.0990	1.19	<0.00495	<0.297	0.170	<0.0990	
	04/05/12	<0.097	<0.097	0.84	<0.97	<0.19	0.012	<0.0097	<0.0097	<0.097	<0.0097	0.036	<0.0097	<0.097	3.4	<0.0097	<1.0	1.5	<0.097	
	10/01/2012	<0.096	<0.096	<0.096	<0.096	<0.096	<0.0048	<0.0048	0.011 B	<0.096	<0.0048	<0.0096	<0.0048	<0.096	<0.096	<0.0048	<0.096	<0.096	<0.096	
	03/29/13	<0.099	<0.099	<0.099	<0.099	<0.099	0.016	0.012	0.018	<0.099	0.015	0.020	<0.0050	<0.099	0.0099	0.0090	<0.099	<0.099	<0.099	
dup	03/29/13	<0.10	<0.10	<0.10	<0.10	<0.10	<0.0052	<0.0052	<0.0052	<0.10	<0.0052	<0.0052	<0.0052	<0.10	<0.10	<0.0052	<0.10	<0.10	<0.10	
	09/16/13	<0.50	<0.50	<0.50	<0.50	<0.50	<0.025	<0.025	<0.025	<0.50	<0.025	<0.025	<0.025	<0.50	<0.025	<0.50	<0.025	<0.50	<0.50	
	03/28/14	<0.10	<0.10	<0.10	<0.10	<0.10	<0.0052	<0.0052	<0.0052	<0.10	<0.0052	<0.0052	<0.0052	<0.10	<0.10	<0.0052	<0.10	<0.10	<0.10	
	09/09/14	<0.10	<0.10	<0.10	<0.10	<0.10	<0.0052	<0.0052	<0.0052	<0.10	<0.0052	<0.0052	<0.0052	<0.10	<0.10	<0.0052	<0.10	<0.10	<0.10	
	03/09/15	<0.010	<0.013	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010	<0.010*	<0.010	0.012	<0.010	<0.010
dup	03/09/15	<0.011	<0.014	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011*	<0.011	0.013	<0.011	0.012
	09/11/15	<0.0099	<0.013	0.022	<0.0099	0.025*	<0.0099	<0.0099*	<0.0099	<0.0099	<0.0099	<0.0099	<0.0099	<0.049	0.15	<0.0099	<0.0099	0.099	<0.049	
<b>KINDER MORGAN</b>																				
<b>MW-8</b>	02/16/00	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	05/31/00	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	08/24/00	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	12/01/00	-	-	0.240	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.680	0.140	0.160		
	02/22/01	-	-	0.221	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.104	ND		
	05/16/01	-	-	0.149	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
dup	05/16/01	-	-	0.128	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	09/21/01	-	-	0.160	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.260	0.100	ND	
	03/14/02	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
dup	03/14/02	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	09/27/02	-	-	0.148	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	03/18/03	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
dup	03/18/03	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	09/24/03	-	-	0.181	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	03/30/04	-	-	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	<0.100	<0.200	<0.100	<0.100	<0.100	
	09/27/04	-	-	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	<0.100	<0.200	<0.100	<0.100	<0.100	
dup	09/27/04	-	-	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	<0.100	<0.200	<0.100	<0.100	<0.100	
	03/29/05	-	-	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	<0.100	<0.200	<0.100	<0.100	<0.100	
	09/21/05	-	-	<0.0204	<0.0204	<0.0204	<0.0204	<0.0204	<0.0204	<0.0204	<0.0204	<0.0204	<0.0204	<0.0204	<0.0204	<0.0204	<0.0204	<0.0204	<0.0204	
	03/15/06	-	-	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	
dup	03/15/06	-	-	0.0260	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	
	09/26/06	-	-	0.147	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.600 <sup>6</sup>	0.0601	0.0326
	03/22/07	-	-	0.0292	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.314 <sup>6</sup>	<0.0196	<0.0196	
	09/20/07	-	<0.0100	0.0625	<0.0150 <sup>6</sup>	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.155 <sup>6</sup>	0.0153	<0.0200 <sup>6</sup>	
dup	09/20/07	-	<0.0100	0.0662	<0.0150 <sup>6</sup>	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.105 <sup>6</sup>	0.0143	<0.0150 <sup>6</sup>	
	03/24/08	-	<0.0044	<0.0024	<0.0034	<0.0036	<0.0026	<0.0043	<0.0023	<0.0029	<0.0025	<0.0034	<0.0025	<0.0044	<0.0038	<0.0026	0.12	<0.0050	<0.0035	
	09/22/08	-	0.0042	0.053	0.0050	0.0050	<0.0026	<0.0043	<0.0023	<0.0029	<0.0025	<0.0034	<0.0025	<0.0044	0.010	<0.0026	0.16	0.0095	0.0098	
dup	09/22/08	-	0.0044	0.066	0.0048	0.0047	<0.0026	<0.0043	0.0038	<0.0029	<0.0025	<0.0034	<0.0025	0.0045	0.010	<0.0026	0.18	0.011	0.0097	
	03/16/09	-	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.00476								

**TABLE 3**  
**GROUNDWATER ANALYTICAL RESULTS - PAH COMPOUNDS**  
 Willbridge Terminals  
 Portland, Oregon

		1-Methyl-naphthalene	2-Methyl-naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene	
dup	03/16/09	-	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.00476	<0.00476	<0.00476	<0.00476	<0.00476	<0.00476	<0.190	<0.0952	<0.0952		
	09/15/09	0.630	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	0.00654	0.00612	<0.00525	0.00619	0.00524	<0.0052	0.00819	<0.143	<0.0952	<0.0952			
	03/17/10	<0.0962	<0.0962	<0.0962	<0.0962	<0.0962	0.00587	0.00633	0.00764	<0.0962	0.00617	0.0103	<0.00481	<0.0962	0.00590	<0.0962	<0.0962	<0.0962		
	09/20/10	-	<0.190	<0.190	<0.190	<0.190	<0.00952	<0.00952	<0.00952	<0.190	<0.00952	<0.00952	<0.00952	<0.190	<0.00952	<0.190	<0.190	<0.190		
	03/21/11	<0.25	<0.25	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.25	<0.050	<0.050	
	09/27/11	0.041	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.056	<0.020	<0.020	
	03/27/12	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.056	<0.020	<0.020	
<b>MW-8</b>	09/24/12	<0.20	<0.20	<0.20	<0.20	<0.20	<0.020	<0.020	<0.040	<0.040	<0.020	<0.20	<0.020	<0.20	<0.020	<0.20	<0.20	<0.20	<0.20	
	03/25/13	<0.20	<0.20	<0.20	<0.20	<0.20	<0.020	<0.020	<0.040	<0.020	<0.040	<0.20	<0.020	<0.20	<0.020	<0.20	<0.20	<0.20	<0.20	
	09/10/13	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.020	<0.040	<0.020	<0.040	<0.20	<0.020	<0.20	<0.020	<0.20	<0.20	<0.20	<0.20	
	03/03/14	<0.040	<0.20	<0.20	<0.20	<0.20	<0.020	<0.020	<0.040	<0.020	<0.040	<0.20	<0.020	<0.20	<0.020	<0.20	<0.20	<0.20	<0.20	
dup	03/03/14	<0.20	<0.20	<0.20	<0.20	<0.20	<0.020	<0.020	<0.040	<0.020	<0.040	<0.20	<0.020	<0.20	<0.020	<0.20	<0.20	<0.20	<0.20	
	08/26/14	<0.20	<0.20	<0.20	<0.20	<0.20	<0.020	<0.020	<0.040	<0.020	<0.040	<0.20	<0.020	<0.20	<0.020	<0.20	<0.20	<0.20	<0.20	
	03/03/15	<0.20	<0.20	<0.20	<0.20	<0.20	<0.020	<0.020	<0.040	<0.020	<0.040	<0.20	<0.020	<0.20	<0.020	<0.20	<0.20	<0.20	<0.20	
	08/19/15	<0.00821	<0.00902	<0.100	<0.0120	<0.0140	0.00627 J	<0.0116	0.00325 J	<0.00227	<0.0136	<0.0108	<0.00396	<0.0157	<0.00850	<0.0148	<0.0198	<0.00820	<0.0117	
<b>MW-25</b>	09/21/01	-	-	0.240	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.120	ND	ND	
	03/14/02	-	-	0.172	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	09/27/02	-	-	0.194	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.101	
	03/18/03	-	-	0.163	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	09/24/03	-	-	0.289	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	03/30/04	-	-	0.233	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	<0.100	<0.350	<0.100	<0.100	
	09/27/04	-	-	0.384	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	<0.100	<0.500	<0.100	<0.100	
	03/28/05	-	-	0.177	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	<0.100	<0.250	<0.100	<0.100	
	09/21/05	-	-	0.205	<0.0202	<0.0202	<0.0202	<0.0202	<0.0202	<0.0202	<0.0202	<0.0202	<0.0202	<0.0202	<0.0202	<0.0202	<0.0202	<0.0202	<0.0202	
	03/15/06	-	-	0.112	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.135	<0.0192	<0.0255	
	09/26/06	-	-	0.190	<0.0204	<0.0204	<0.0204	<0.0204	<0.0204	<0.0204	<0.0204	<0.0204	<0.0204	<0.0204	<0.0204	<0.0204	<0.184 <sup>6</sup>	<0.0306 <sup>6</sup>	0.0633	
	03/22/07	-	-	0.175	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.382 <sup>6</sup>	<0.0294 <sup>6</sup>	0.0537	
	09/20/07	-	<0.0150	0.224	<0.0150	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.400 <sup>6</sup>	0.0338	0.0577	
	03/24/08	-	<0.0075 <sup>5</sup>	0.20	<0.0034	<0.0036	0.015	0.025	0.023	0.027	<0.0025	0.021	0.0050	0.013	<0.0038	0.017	<0.17 <sup>5</sup>	0.023	0.14	
	09/22/08	-	<0.013	0.25	<0.011	<0.011	<0.0026	0.0069	0.0042	0.0078	<0.0025	<0.0034	<0.0025	<0.0044	<0.0038	0.0048	0.24	0.023	0.077	
	03/16/09	-	<0.0952	0.136	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.00476	<0.00476	<0.00620	<0.00476	<0.0052	<0.0052	<0.00476	<0.286	<0.0952	<0.0952	
	09/15/09	<0.0952	<0.0952	0.229	<0.0952	<0.0952	0.00593	0.00843	0.00515	<0.0952	0.00488	0.00972	<0.00476	<0.0952	<0.0952	0.00520	<0.143	<0.0952	<0.0952	
	03/16/10	<0.0971	<0.0971	0.200	<0.0971	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	<0.0971	<0.00485	<0.0971	<0.0971	<0.0971	
	09/20/10	-	<0.190	0.366	<0.190	<0.0952	<0.0952	<0.0952	<0.190	<0.0952	<0.0952	<0.0952	<0.190	<0.0952	<0.0952	<0.190	<0.0952	<0.286	<0.190	
	03/21/11	<0.25	<0.25	0.19	<0.050	0.012 <sup>10</sup>	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.078 <sup>10</sup>	0.022 <sup>10</sup>	0.040 <sup>10</sup>
	09/27/11	<0.060	<0.060	0.15	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.24	0.15	0.056	
	03/27/12	<0.020	<0.020	0.11	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.05	0.025	
	09/24/12	<0.20	<0.20	<0.20	<0.20	<0.20	<0.020	<0.020	<0.040	<0.020	<0.040	<0.20	<0.020	<0.20	<0.020	<0.20	<0.20	<0.20	<0.20	
	03/26/13	<0.20	<0.20	<0.20	<0.20	<0.20	<0.020	<0.020	<0.040	<0.020	<0.040	<0.20	<0.020	<0.20	<0.020	<0.20	<0.20	<0.20	<0.20	
	09/10/13	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.040	<0.020	<0.040	<0.20	<0.020	<0.20	<0.020	<0.20	<0.20	<0.20	<0.20	
	03/03/14	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.040	<0.020	<0.040	<0.20	<0.020	<0.20	<0.020	<0.20	<0.20	<0.20	<0.20	
	08/26/14	ND	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.040	<0.020	<0.040	<0.20	<0.020	<0.20	<0.020	<0.20	<0.20	<0.20	<0.20	
	03/03/15	<0.20	<0.20	<0.20	<0.20	<0.20	<0.020	<0.020	<0.040	<0.020	<0.040	<0.20	<0.020	<0.20	<0.020	<0.20	<0.20	<0.20	<0.20	
	08/19/15	<0.00821	<0.00902	0.390	<0.0120	<0.0140	0.00761 J	<0.0116	0.00222 J	<0.00227	<0.0136	<0.0108	<0.00396	<0.0157	<0.00850	<0.0148	0.211 J	0.0403 J	0.0368 J	
<b>MW-26</b>	02/17/00	-	-	2.050	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.690	2.270	1.05	
dup	02/17/00	-	-	1.78	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.24	1.74	0.714	
	05/30/00	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.84	ND	ND	
	08/23/00	-	-	2.27	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.39	ND	ND	
dup	08/23/00	-	-	2.27	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.63	ND	ND	
	12/01/00	-	-	0.840	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.380	ND	0.360	
	02/21/01	-	-	NS/S	NS/S	NS/S	NS/S													

**TABLE 3**  
**GROUNDWATER ANALYTICAL RESULTS - PAH COMPOUNDS**  
 Willbridge Terminals  
 Portland, Oregon

		1-Methyl-naphthalene	2-Methyl-naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo (a) anthracene	Benzo (a) pyrene	Benzo (b) fluoranthene	Benzo (g,h,i) perylene	Benzo (k) fluoranthene	Chrysene	Dibenz (a,h) anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene	
	03/13/02	-	-	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	
	09/27/02	-	-	1.61	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.510	1.43	ND	ND	2.36	ND	
	03/18/03	-	-	1.07	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.641	0.974	ND	7.16	1.51	ND	
	09/24/03	-	-	1.86	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.596	1.61	ND	ND	2.3	ND	
	03/30/04	-	-	1.33	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.400	<0.200	1.52	<0.200	<3.80	0.357	0.219	
	09/27/04	-	-	2.33	<0.200	0.277	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.400	0.985	2.07	<0.200	<2.00	2.01	0.664	
	03/28/05	-	-	2.02	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<1.00	1.26	1.63	<0.500	<1.62	2.51	0.924	
	09/21/05	-	-	1.32	<0.200	0.165	0.0459	<0.0400	0.0560	<0.0400	<0.0400	0.0875	<0.0400	0.521	0.967	<0.0400	<0.980	1.48	0.396	
	03/15/06	-	-	1.01	<0.192	<0.192	<0.192	<0.192	<0.192	<0.192	<0.192	<0.192	<0.192	0.225	0.883	<0.192	<3.75	0.538	<0.192	
<b>MW-26</b>	09/26/06	-	-	1.63	<0.202	<0.202	<0.202	<0.202	<0.202	<0.202	<0.202	<0.202	0.243	1.24	<0.202	<1.21 <sup>6</sup>	1.48	<0.202		
dup	09/26/06	-	-	1.61	<0.0750 <sup>6</sup>	0.100	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	0.226	1.17	<0.0500	<1.18 <sup>6,7</sup>	1.60	0.151	
	03/22/07	-	-	0.431	<0.0980	<0.0980	<0.0980	<0.0980	<0.0980	<0.0980	<0.0980	<0.0980	<0.0980	0.133	0.372	<0.0980	<1.96 <sup>6</sup>	0.331	<0.0980	
	09/20/07	-	<0.0500 <sup>6</sup>	0.602	<0.0300 <sup>6</sup>	0.0440	0.0125	<0.0100	<0.0100	0.0114 <sup>4</sup>	<0.0100	0.0196	<0.0100	0.390	0.477	<0.0100	<1.25 <sup>6</sup>	0.0903	0.334	
	03/25/08	-	12 <sup>8</sup>	0.84	<0.088 <sup>6</sup>	0.11	0.098	0.057	0.064	0.054	<0.0025	0.15	0.011	1.0	0.62	0.035	<0.76 <sup>6</sup>	0.84	0.81	
dup	03/25/08	-	12 <sup>8</sup>	0.78	<0.070 <sup>6</sup>	0.064	0.073	0.050	0.042	0.037	<0.0025	0.11	0.0061	0.73	0.55	0.030	<0.68 <sup>6</sup>	0.67	0.56	
	09/22/08	-	0.25	1.6	<0.060	0.12	0.081	0.031	0.040	0.034	<0.0025	0.083	0.0075	1.1	1.3	0.021	0.88	0.88	0.83	
	03/16/09	-	0.422	1.15	<0.200	0.0540	0.0218	0.0202	<0.200	0.0116	0.0795	<0.0100	0.917	0.825	0.0130	<0.600	1.29	0.554		
	09/15/09	11.1	0.192	1.59	<0.0952	0.239	0.0537	0.0214	0.0176	<0.0952	0.0130	0.0805	0.00490	0.959	1.10	0.0129	<0.429	2.87	0.531	
dup	09/15/09	5.02	<0.0966	0.983	<0.0966	0.165	0.0390	0.0139	0.0122	<0.0966	0.00866	0.0550	<0.00483	0.710	0.597	0.00803	<0.242	1.69	0.375	
	03/16/10	12.7	1.80	0.491	<0.0980	<0.0980	0.0295	0.0169	0.0114	<0.0980	0.00677	0.0494	<0.00490	0.367	0.230	0.00958	<0.490	<0.0980	0.306	
	09/20/10	-	0.291	1.41	<0.190	<0.190	0.0561	0.0222	0.0161	<0.190	0.0102	0.0727	0.0106	0.507	1.20	0.0156	<0.524	1.20	0.335	
	03/21/11	52	0.11 <sup>10</sup>	1.7	<0.050	0.045 <sup>10</sup>	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	0.059	1.7	<0.050	0.87	0.39	0.046 <sup>10</sup>	
	09/27/11	5.8	<0.20	0.94	0.061	0.11	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.24	0.95	<0.020	0.33	0.82	0.085	
	03/27/12	28	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	<2.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	
	09/24/12	14	<0.20	0.6	<0.20	<0.20	<0.020	<0.020	<0.040	<0.040	<0.020	<0.20	<0.020	<0.20	0.47	<0.020	0.95	0.22	<0.20	
	03/26/13	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.40	<0.40	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	
	09/09/13	7	<0.20	0.57	<0.20	<0.20	<0.020	<0.020	<0.040	<0.040	<0.040	<0.20	<0.0200	<0.2	0.48	<0.020	0.28	0.6	<0.20	
	03/03/14	14	<0.20	0.37	<0.20	<0.20	<0.020	<0.020	<0.040	<0.040	<0.020	<0.20	<0.020	<0.20	0.27	<0.020	0.7	<0.20	<0.20	
	08/26/14	7.5	<0.40	0.67	<0.40	<0.40	<0.40	<0.40	<0.80	<0.40	<0.80	<0.40	<0.40	<0.40	0.68	<0.40	<0.40	<0.40	<0.40	
	03/03/15	3.7	<0.20	0.58	<0.20	<0.20	<0.20	<0.40	<0.20	<0.40	<0.20	<0.20	<0.20	<0.20	0.40	<0.20	<0.20	<0.20	<0.20	
	08/19/15	6.44	0.0342 J	1.06	0.0540	0.0411 J	0.0106 J	<0.0116	<0.00212	0.00385 J	<0.0136	<0.0108	<0.00396	0.0687	0.69	<0.0148	<0.0198	0.444	0.0443 J	
<b>MW-33</b>	02/16/00	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	05/30/00	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	08/24/00	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	11/30/00	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	02/22/01	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.222	ND	ND	
dup	02/22/01	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.161	ND	ND	
	05/16/01	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	09/21/01	-	-	0.340	ND	ND	0.100	ND	0.220	0.140	0.120	0.200	ND	0.180	ND	0.120	0.160	ND	0.160	
	03/14/02	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	09/27/02	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	03/18/03	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	09/24/03	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	03/29/04	-	-	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	
	09/27/04	-	-	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	
	03/29/05	-	-	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	
	09/21/05	-	-	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0396	<0.0198	0.0321
dup	09/21/05	-	-	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	0.0384
	03/15/06	-	-	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200
	09/27/06	-	-	<0.00990	<0.00990	<0.00990	<0.00615	<0.00495	0.00540	<0.00990	0.00659	<0.00718	<0.00495	<0.00990	<0.00990	<0.00510	0.0468 <sup>4,5</sup>	<0.00990	0.0189	
	03/22/07	-	-	<0.00976	<0.00976	<0.00976	<0.00488	<0.00488	<0.00488	<0.00976	<0.00488	<0.00488	<0.00488	<0.00976	<0.00976	<0.00488	0.0146	<0.00976	0.0193	
dup	03/22/07	-	-	<0.00971	<0.00971	<0.00971	<0.00485	<0.00485	<0.00485	<0.00971	<0.00485	<0.00485	<0.00485	<0.00971	<0.00971	<0.00485	0.0145	<0.00971	0.0157	
	09/18/07	-	<0.0976	<0.0976	<0.0976	<0.0976	<0.00488	<0.00488	<0.00488	<0.0976	<0.00488	<0.00488	<0.00488	<0.0976	<0.0976	<0.00488	<0.0976	<0.0976	<0.0976	

**TABLE 3**  
**GROUNDWATER ANALYTICAL RESULTS - PAH COMPOUNDS**  
 Willibrige Terminals  
 Portland, Oregon

		1-Methyl-naphthalene	2-Methyl-naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo (a) anthracene	Benzo (a) pyrene	Benzo (b) fluoranthene	Benzo (g,h,i) perylene	Benzo (k) fluoranthene	Chrysene	Dibenz (a,h) anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene	
	03/25/08	-	<0.0023	<0.0044	<0.0034	<0.0036	<0.0026	<0.0043	<0.0023	0.0030	<0.0025	<0.0034	<0.0025	<0.0044	<0.0038	<0.0026	0.017	<0.0050	<0.0035	
	09/23/08	-	0.0026	<0.0044	<0.0034	<0.0036	0.0069	<0.0043	<0.0023	<0.0029	<0.0025	0.0039	<0.0025	<0.0044	<0.0038	<0.0026	0.0038	<0.0050	0.029	
	03/16/09	-	<0.0976	<0.0976	<0.0976	<0.0976	<0.00488	<0.00488	<0.00488	<0.0976	<0.00488	<0.00488	<0.00488	<0.0976	<0.0976	<0.00488	<0.0976	<0.0976	<0.0976	
	09/14/09	<0.0962	<0.0962	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.0962	<0.00481	<0.0962	<0.0962	<0.0962	
	03/16/10	<0.0952	<0.0952	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.0952	<0.00476	<0.0952	<0.0952	<0.0952
	09/20/10	-	<0.190	<0.190	<0.190	<0.190	<0.00952	<0.00952	<0.00952	<0.190	<0.00952	<0.00952	<0.00952	<0.190	<0.190	<0.00952	<0.190	<0.190	<0.190	
	03/21/11	<0.25	<0.25	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.25	<0.050	<0.050	
	09/27/11	0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.059	<0.020	0.028	
	03/26/12	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	
	09/24/12	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.020	<0.020	<0.040	<0.040	<0.020	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	
<b>MW-33</b>	03/25/13	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.020	<0.020	<0.040	<0.040	<0.020	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	
	09/09/13	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.020	<0.020	<0.040	<0.040	<0.020	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	
	03/03/14	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.020	<0.020	<0.040	<0.040	<0.020	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	
	08/26/14	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.020	<0.020	<0.040	<0.040	<0.020	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	
	03/03/15	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.020	<0.020	<0.040	<0.040	<0.020	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	
	08/19/15	<0.00821	<0.00902	<0.0100	<0.0120	<0.0140	0.00846 J	<0.0116	<0.00212	<0.00227	<0.0136	<0.0108	<0.00396	<0.0157	<0.00850	<0.0148	<0.0198	0.00875 J	0.0459 J	

**TABLE 3**  
**GROUNDWATER ANALYTICAL RESULTS - PAH COMPOUNDS**  
 Willbridge Terminals  
 Portland, Oregon

		1-Methyl-naphthalene	2-Methyl-naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo (a) anthracene	Benzo (a) pyrene	Benzo (b) fluoranthene	Benzo (g,h,i) perylene	Benzo (k) fluoranthene	Chrysene	Dibenz (a,h) anthracene	Fluoranthene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene		
<b>MW-34</b>	09/21/01	-	-	0.280	ND	ND	ND	ND	0.100	ND	ND	ND	ND	ND	0.120	0.120	ND	ND		
	03/14/02	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
	09/27/02	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
	03/18/03	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
	09/24/03	-	-	0.151	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND		
	03/29/04	-	-	0.0524	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0600	<0.0200	<0.0200		
	09/27/04	-	-	0.135	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	<0.100	<0.150	<0.100	<0.100		
dup	03/29/05	-	-	<0.111	<0.111	<0.111	<0.111	<0.111	<0.111	<0.111	<0.111	<0.111	<0.222	<0.111	<0.111	<0.111	<0.111	<0.111		
	03/29/05	-	-	0.129	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100		
	09/21/05	-	-	0.332	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0297	<0.0198	<0.218	<0.0198	<0.0222	
	03/15/06	-	-	0.118	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0990	<0.0198	<0.0198	<0.0198	
	09/27/06	-	-	<0.00990	<0.00990	<0.00990	<0.00615	<0.00495	0.00540	<0.00990	0.00659	<0.00718	<0.00495	<0.00990	<0.00990	<0.00510	0.0468 <sup>4,5</sup>	<0.00990	0.0189	
	03/22/07	-	-	0.0215	<0.00985	<0.00985	<0.00493	<0.00493	<0.00493	<0.00985	<0.00493	<0.00493	<0.00493	<0.00985	<0.00985	<0.00493	<0.0591 <sup>6</sup>	<0.00985	<0.00985	
	09/18/07	-	<0.0971	0.375	<0.0971	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	<0.0971	<0.00485	<0.971 <sup>6</sup>	<0.0971	<0.0971	
	03/25/08	-	0.0025	0.071	<0.0034	0.0070	<0.0026	<0.0043	<0.0025	<0.0029	<0.0025	<0.0034	<0.0025	<0.0044	<0.0038	<0.0026	<0.075 <sup>6</sup>	0.0065	0.012	
	06/24/08	-	0.0073	0.063	0.0069	0.010	0.0078	0.0057	0.0062	0.013	0.0045	0.0079	0.0068	0.0090	0.0091	0.014	0.11	0.020	0.016	
	09/23/08	-	0.0089	0.31	<0.0034	<0.0036	0.0074	<0.0043	<0.0023	0.0029	<0.0025	0.0051	<0.0025	<0.0044	<0.0038	0.0033	<0.18	<0.0050	0.018	
	01/05/09	-	<0.0909	<0.0909	<0.0909	<0.00455	<0.00455	<0.00455	<0.00455	<0.00909	<0.00455	<0.00455	<0.00455	<0.0909	<0.0909	<0.00455	<0.0909	<0.0909	<0.0909	
	03/16/09	-	<0.100	<0.100	<0.100	<0.100	<0.00500	<0.00500	<0.00500	<0.100	<0.00500	<0.00500	<0.00500	<0.100	<0.100	<0.00500	<0.150	<0.100	<0.100	
	09/14/09	<0.0952	<0.0952	0.148	<0.0952	<0.0952	<0.00476	0.00476	<0.00476	<0.0952	<0.00476	<0.00509	<0.00476	<0.0952	<0.0952	<0.00476	<0.0952	<0.0952	<0.0952	
	03/16/10	<0.0952	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.0952	<0.00476	<0.0952	<0.0952	<0.0952	
	09/20/10	-	<0.190	0.206	<0.190	<0.190	<0.00952	<0.00952	<0.00952	<0.190	<0.00952	<0.00952	<0.00952	<0.190	<0.190	<0.00952	<0.190	<0.190	<0.190	
	03/21/11	<0.25	<0.25	0.011 <sup>10</sup>	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.25	<0.050	<0.050	
	09/27/11	0.022	0.022	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.088	<0.020	<0.020	<0.020	
	03/26/12	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	
	09/24/12	<0.20	<0.20	<0.20	<0.20	<0.20	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	
	03/25/13	<0.20	<0.20	<0.20	<0.20	<0.20	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	
	09/09/13	<0.20	<0.20	<0.20	<0.20	<0.20	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	
	03/03/14	<0.20	<0.20	<0.20	<0.20	<0.20	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	
	08/26/14	<0.20	<0.20	<0.20	<0.20	<0.20	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	
	03/03/15	<0.20	<0.20	<0.20	<0.20	<0.20	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	
	<b>08/19/15</b>	<b>0.0260 J</b>	<b>0.0145 J</b>	<b>0.0187 J</b>	<b>&lt;0.0120</b>	<b>&lt;0.0140</b>	<b>0.00697 J</b>	<b>&lt;0.0116</b>	<b>0.00222 J</b>	<b>0.00244 J</b>	<b>&lt;0.0136</b>	<b>&lt;0.0108</b>	<b>&lt;0.00396</b>	<b>&lt;0.0157</b>	<b>&lt;0.00850</b>	<b>&lt;0.0148</b>	<b>&lt;0.0198</b>	<b>0.0151 J</b>	<b>&lt;0.0117</b>	
<b>MW-36</b>	02/16/00	-	-	0.143	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	05/31/00	-	-	0.228	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	08/24/00	-	-	0.269	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	11/30/00	-	-	0.420	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.180	ND	ND	ND	
	02/21/01	-	-	0.304	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	05/16/01	-	-	0.247	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	09/21/01	-	-	0.240	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.140	ND	ND	ND	
	03/13/02	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	03/18/03	-	-	0.178	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	09/24/03	-	-	0.307	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	03/29/04	-	-	0.246	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.200	<0.200	<0.0525	0.0487	
	09/27/04	-	-	0.710	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	<0.150	<0.100	<1.00	<0.100	<0.100	
	09/21/05	-	-	0.382	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0300	<0.0200	<0.0200	<0.0200	<0.0574	0.0616	
	03/15/06	-	-	0.0302	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0388	<0.0194	0.0226
	09/27/06	-	-	0.606	<0.0200 <sup>6</sup>	<0.0200 <sup>6</sup>	<0.00500	<0.00500	<0.00500	<0.0100	<0.00500	<0.00500	<0.00500	<0.0100	<0.0200 <sup>6</sup>	<0.00500	<0.400 <sup>6,7</sup>	0.103	0.121	
dup	09/27/06	-	-	0.528	<0.0199 <sup>6</sup>	<0.0249 <sup>6</sup>	0.00544	<0.00498	<0.00498	<0.00995	<0.00498	0.00527	<0.00522	<0.00995	<0.0149 <sup>6</sup>	<0.00559	<0.279 <sup>6,7</sup>	0.104	0.109	
	03/22/07	-	-	0.289	<0.0146 <sup>6</sup>	<0.00971	<0.00485	<0.00485	<0.00485	<0.00971	<0.00485	<0.00485	<0.00485	<0.00971	<0.00971	<0.00485	<0.320 <sup>6</sup>	0.0513	0.0478	
	09/18/07	-	<0.0995	0.564	<0.0995	<0.0995	<0.00498	<0.00498	<0.00498	<0.0995	<0.00498	<0.00498	<0.00498	<0.0995	<0.0995	<0.00498	<0.896 <sup>6</sup>	<0.0995	0.148	
dup	09/18/07	-	<0.0980	0.552	<0.0980	<0.0980	<0.00490	<0.00490	<0.00490	<0.0980	<0.00490	<0.00490	<0.00490	<0.0980	<0.0980	<0.00490	<0.882 <sup>6</sup>	0.110	0.151	
	03/25/08	-	<0.0023	0.088	<0.0034	<0.0036	<0.0026	&												

**TABLE 3**  
**GROUNDWATER ANALYTICAL RESULTS - PAH COMPOUNDS**

		1-Methyl-naphthalene	2-Methyl-naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo (a) anthracene	Benzo (a) pyrene	Benzo (b) fluoranthene	Benzo (g,h,i) perylene	Benzo (k) fluoranthene	Chrysene	Dibenzo (a,h) anthracene	Fluoranthene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene		
	09/23/08	-	0.0089	0.44	<0.0034	<0.0036	<0.0026	<0.0043	<0.0023	<0.0029	<0.0025	<0.0034	<0.0025	<0.0044	<0.0038	<0.0026	<0.18	0.050	0.10	
MW-36	03/16/09	-	<0.0952	0.272	<0.0952	<0.0952	<0.0476	<0.0476	<0.0476	<0.0952	<0.0476	<0.0476	<0.0476	<0.0952	<0.0952	<0.0476	<0.190	<0.0952	<0.0952	
	09/14/09	<0.0971	<0.0971	0.304	<0.0971	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	<0.00485	<0.0971	<0.0485	<0.0971	<0.0971	
dup	09/14/09	3.41	<0.0962	0.809	<0.0962	0.117	0.0265	0.0106	0.00920	<0.0962	0.00597	0.0421	<0.00481	0.515	0.482	0.00562	<0.192	1.22	0.293	
	03/16/10	<0.0971	<0.0971	0.196	<0.0971	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	<0.00485	<0.0971	<0.0485	<0.0971	<0.0971	
	09/20/10	-	<0.190	0.324	<0.190	<0.190	<0.00952	<0.00952	<0.00952	<0.190	<0.00952	<0.00952	<0.00952	<0.190	<0.190	<0.00952	<0.190	<0.190	<0.190	
	03/21/11	<0.25	<0.25	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.25	<0.050	<0.050	
	09/27/11	<0.020	<0.020	0.095	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.074	0.056	0.039	
	03/26/12	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	
	09/24/12	<0.20	<0.20	<0.20	<0.20	<0.20	<0.020	<0.020	<0.040	<0.040	<0.020	<0.20	<0.020	<0.20	<0.020	<0.20	<0.20	<0.20	<0.20	
	03/25/13	<0.20	<0.20	<0.20	<0.20	<0.20	<0.020	<0.020	<0.040	<0.040	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	
	09/09/13	<0.20	<0.20	<0.20	<0.20	<0.20	<0.020	<0.020	<0.040	<0.020	<0.040	<0.20	<0.020	<0.20	<0.020	<0.20	<0.20	<0.20	<0.20	
	03/03/14	<0.20	<0.20	<0.20	<0.20	<0.20	<0.020	<0.020	<0.040	<0.020	<0.040	<0.20	<0.020	<0.20	<0.020	<0.20	<0.20	<0.20	<0.20	
	08/26/14	<0.20	<0.20	<0.20	<0.20	<0.20	<0.020	<0.020	<0.040	<0.020	<0.040	<0.20	<0.020	<0.20	<0.020	<0.20	<0.20	<0.20	<0.20	
	03/03/15	<0.20	<0.20	<0.20	<0.20	<0.20	<0.020	<0.020	<0.040	<0.020	<0.040	<0.20	<0.020	<0.20	<0.020	<0.20	<0.20	<0.20	<0.20	
	08/19/15	<0.00821	0.0116 J	0.0554	<0.0120	<0.0140	0.00693 J	<0.0116	<0.00212	<0.00227	<0.0136	<0.0108	<0.00396	<0.0157	<0.00850	<0.0148	0.0606 J	0.0882	0.0722	
MW-37	02/16/00	-	-	1.560	ND	0.0862	0.0584	0.077	0.056	ND	ND	ND	ND	0.126	ND	ND	ND	0.605	0.214	
	05/30/00	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.451	0.153	
	08/24/00	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.25	ND	ND	ND	ND	
	11/30/00	-	-	0.680	0.180	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.600	ND	0.660	0.200	0.120	
	02/21/01	-	-	0.183	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.228	ND	ND	ND	ND	
	02/21/01 <sup>1</sup>	-	-	0.588	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.513	ND	ND	0.207	ND	
	05/16/01	-	-	0.401	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.327	ND	ND	0.146	ND	
	09/21/01	-	-	0.140	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.280	0.120	ND	
	03/13/02	-	-	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	
	09/27/02	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.499	ND	ND	0.166	0.122	
dup	09/27/02	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.147	ND	
	03/18/03	-	-	0.435	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.731	ND	ND	ND	ND	
	09/27/04	-	-	<1.00	<1.00	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	0.122	<1.00	<0.100	<1.00	0.184	
	03/29/05	-	-	2.39	<0.250	0.344	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	0.241	<0.400	1.39	1.93	<0.200	<2.00	2.86	
	09/21/05	-	-	0.77	<0.350	<0.100	<0.100	<0.100	<0.100	0.110	<0.100	<0.100	<0.100	<0.100	<0.478	<0.100	<1.90	<0.100	0.131	
	03/15/06	-	-	0.737	<0.433	<0.0962	<0.0962	0.150	<0.0962	0.319	<0.0962	<0.0962	<0.0962	<0.0962	1.18	0.214	<1.49	0.160	0.119	
	09/27/06	-	-	0.653	<0.250 <sup>6</sup>	<0.0400 <sup>6</sup>	0.0212	0.0486	0.0326	0.0717	0.0314	0.0296	0.0120	0.0562	0.342	0.0456	<1.20 <sup>5,7</sup>	0.135	0.123	
	03/22/07	-	-	0.579	<0.194 <sup>6</sup>	<0.0971 <sup>6</sup>	0.0183	0.0330	0.0190	0.0389	0.0230	0.0270	0.00858	<0.0971 <sup>6</sup>	0.820	0.0315	<2.14 <sup>6</sup>	<0.0971 <sup>6</sup>	0.133	
	09/18/07	-	<0.388 <sup>6</sup>	<0.971 <sup>6</sup>	<0.971 <sup>6</sup>	<0.0971	0.0132	0.0297	<0.0194 <sup>6</sup>	<0.388 <sup>6</sup>	<0.0194 <sup>6</sup>	0.0167	<0.0194 <sup>6</sup>	<0.0971	<0.971 <sup>6</sup>	0.0334	<3.11 <sup>6</sup>	<0.971 <sup>6</sup>	0.120	
	03/25/08	-	<0.0023	1.1	<0.48 <sup>6</sup>	0.041	0.044	0.083	0.080	0.15	0.025	0.021	0.015	0.098	1.5	0.15	<1.1 <sup>6</sup>	0.23	0.17	
dup	03/25/08	-	<0.0023	1.0	<0.44 <sup>6</sup>	0.040	0.046	0.11	0.089	0.21	0.031	0.026	0.018	0.074	1.7	0.21	<1.1 <sup>6</sup>	0.23	0.15	
	06/24/08	-	0.012	0.56	<0.19	0.025	<0.0075	0.017	0.015	0.035	0.0053	0.0044	0.0054	0.033	0.75	0.036	0.46	0.099	0.053	
	09/23/08	-	<0.0023	0.70	<0.29	0.031	0.055	0.071	0.065	0.085	0.026	0.051	0.013	0.10	0.68	0.081	<0.69	0.12	0.18	
dup	09/23/08	-	0.031	0.67	<0.22	0.026	0.0079	0.0089	0.0070	0.013	<0.0025	0.0038	<0.0025	0.048	0.58	0.012	<0.52	0.10	0.058	
	01/05/09	-	<0.0930	0.474	<0.465 <sup>6</sup>	<0.465 <sup>6</sup>	0.0119	0.0438	0.0215	0.222	0.0107	0.0247	0.0243	<0.465 <sup>6</sup>	0.406	0.161	<1.40 <sup>6</sup>	<0.465 <sup>6</sup>	<0.0930	
	03/16/09	-	<0.286	0.399	<0.286	<0.0952	0.00564	0.00791	0.00532	<0.0952	<0.00476	0.00894	<0.00476	<0.0952	0.366	0.0100	<0.429	<0.0952	<0.0952	
	09/14/09	20.0	<0.0971	0.631	<0.243	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	<0.00485	0.00506	<0.00485	<0.0971	0.578	<0.0485	<0.340	0.175	<0.0971	
	03/16/10	<0.0976	<0.0976	<0.0976	<0.0976	<0.0976	0.0113	0.0271	0.0153	<0.0976	0.0133	0.0153	0.00761	<0.0976	0.0367	<0.293	<0.0976	<0.0976	<0.0976	
dup	03/16/10	0.313	<0.0962	<0.0962	<0.0962	<0.0962	<0.00481	0.00697	<0.00481	<0.0962	<0.00481	0.00612	<0.00481	<0.0962	0.0102	<0.0962	<0.0962	<0.0962	<0.0962	
	09/20/10	-	<0.194	0.375	<0.194	<0.194	<0.00971	<0.00971	<0.00971	<0.194	<0.00971	<0.00971	<0.0971	<0.194	0.338	0.0112	<0.291	<0.194	<0.194	
	09/20/10	-	<0.194	0.336	<0.194	<0.194	<0.00971	<0.00971	<0.00971	<0.194	<0.00971	<0.00971	<0.0971	<0.194	0.290	<0.00971	<0.291	<0.194	<0.194	
	03/21/11	0.95	<0.25	0.13	0.021 <sup>10</sup>	<0.050	<0.050	<0.050	<0.050	0.015 <sup>10</sup>	<0.050	0.015 <sup>10</sup>	<0.050	<0.050	<0.050	0.19	<0.050	0.084 <sup>10</sup>	<0.050	0.018 <sup>10</sup>
dup	03/21/11	0.92	<0.25	0.13	0.023 <sup>10</sup>	<0.050	<0.050	<0.050	<0.050	<0.050	0.016 <sup>10</sup>	<0.050	<0.050	<0.050	<0.050	0.16	<0.050	0.067 <sup>10</sup>	<0.050	0.016 <sup>10</sup>
	09/27/11	6.9	<0.20	0.32	0.12	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.44	<0.020	0.27	0.068	0.024	
dup	09/27/11	7.0	<0.20	0.24	0.12	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.34	<0.020	0.24	0.059	0.022	
	03/26/12	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	<0.020	0.022	<0.020	

**TABLE 3**  
**GROUNDWATER ANALYTICAL RESULTS - PAH COMPOUNDS**  
 Willbridge Terminals  
 Portland, Oregon

		1-Methyl-naphthalene	2-Methyl-naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo (a) anthracene	Benzo (a) pyrene	Benzo (b) fluoranthene	Benzo (g,h,i) perylene	Benzo (k) fluoranthene	Chrysene	Dibenz (a,h) anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene
dup	03/26/12	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	<0.020	0.022	<0.020	<0.020
	09/24/12	1.2	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.040	<0.040	<0.040	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
<b>MW-37</b>	09/24/12	1.7	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.040	<0.040	<0.040	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
	03/25/13	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.040	<0.040	<0.040	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
dup	03/25/13	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.040	<0.040	<0.040	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
	09/09/13	1.6	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.040	<0.040	<0.040	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
dup	09/09/13	1.5	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.040	<0.040	<0.040	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
	03/03/14	3.7	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.040	<0.040	<0.040	<0.20	<0.20	<0.20	<0.20	<0.20	0.22	<0.20	<0.20
	08/26/14	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.040	<0.040	<0.040	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
dup	08/26/14	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.040	<0.040	<0.040	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
	03/03/15	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.040	<0.040	<0.040	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
dup	03/03/15	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.040	<0.040	<0.040	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
	<b>08/19/15</b>	<b>1.11</b>	<b>0.0194 J</b>	<b>0.235</b>	<b>0.0304 J</b>	<b>0.0142 J</b>	<b>0.00702 J</b>	<b>&lt;0.0116</b>	<b>0.00250 J</b>	<b>&lt;0.00227</b>	<b>&lt;0.0136</b>	<b>&lt;0.0108</b>	<b>&lt;0.00396</b>	<b>&lt;0.0157</b>	<b>0.181</b>	<b>&lt;0.0148</b>	<b>&lt;0.0198</b>	<b>0.0482 J</b>	<b>0.0177 J</b>
<b>MW-40</b>	02/16/00	-	-	0.0972	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	05/30/00	-	-	0.124	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	08/24/00	-	-	0.141	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	11/30/00	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	02/21/01	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	05/16/01	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/21/01	-	-	ND	ND	ND	ND	ND	ND	0.120	ND	ND	0.100	0.380	ND	0.140	ND	0.120	0.240
	03/13/02	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/27/02	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	03/18/03	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/24/03	-	-	0.109	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
dup	09/24/03	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	03/29/04	-	-	0.0609	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0900	<0.0300	<0.0200
dup	03/29/04	-	-	0.0588	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0900	<0.0266	<0.0200
	09/27/04	-	-	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
	03/29/05	-	-	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
	09/21/05	-	-	0.0732	<0.0190	<0.0190	<0.0190	<0.0190	<0.0190	<0.0190	<0.0190	<0.0190	<0.0190	<0.0190	<0.0190	<0.0190	<0.105	0.0381	<0.0190
	03/15/06	-	-	0.0716	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0769	0.0297	<0.0192
	09/26/06	-	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	03/22/07	-	-	0.0655	<0.00971	<0.00971	<0.00485	<0.00485	<0.00485	<0.00971	<0.00485	<0.00485	<0.00485	<0.00971	<0.00485	<0.126 <sup>b</sup>	0.0259	0.0114	
	09/18/07	-	<0.0990	<0.0990	<0.0990	<0.0990	<0.00495	<0.00495	<0.00495	<0.0990	<0.00495	<0.00495	<0.00495	<0.0990	<0.00495	<0.297 <sup>b</sup>	<0.0990	<0.0990	
	03/25/08	-	0.0023	0.075	<0.0034	0.010	<0.0026	<0.0043	<0.0023	<0.0029	<0.0025	<0.0034	<0.0025	<0.0044	<0.0038	<0.0026	<0.027 <sup>b</sup>	0.028	0.011
	09/23/08	-	<0.0023	0.10	<0.0034	<0.0036	<0.0026	<0.0043	<0.0023	<0.0029	<0.0025	<0.0034	<0.0025	<0.0044	<0.0038	<0.0026	<0.090	0.022	<0.0035
	03/16/09	-	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.0952	<0.0952	<0.0952	<0.0952
	09/14/09	<0.0962	<0.0962	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<0.0962	<0.00481	<0.0962	<0.0962
	03/16/10	<0.0976	<0.0976	<0.0976	<0.0976	<0.0976	<0.00488	<0.00488	<0.00488	<0.0976	<0.00488	<0.00488	<0.00488	<0.0976	<0.00488	<0.0976	<0.00488	<0.0976	<0.0976
	09/20/10	-	<0.192	<0.192	<0.192	<0.192	<0.00962	<0.00962	<0.00962	<0.192	<0.00962	<0.00962	<0.00962	<0.192	<0.00962	<0.192	<0.192	<0.192	<0.192
	03/21/11	<0.25	<0.25	0.045 <sup>10</sup>	<0.050	0.0085 <sup>10</sup>	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050	<0.050
	09/27/11	0.022	0.020	0.093	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.080	0.036	<0.020
	03/26/12	<0.020	<0.020	0.062	<0.020	<0.020	<0.020	<0.020	<0.040	<0.020	<0.040	<0.020	<0.020	<0.020	<0.020	<0.020	<0.050	<0.020	<0.020
	03/24/12	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.040	<0.020	<0.040	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
	03/25/13	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.040	<0.020	<0.040	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
	03/03/14	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.040	<0.020	<0.040	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
	08/26/14	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.040	<0.020	<0.040	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
	03/03/15	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.040	<0.020	<0.040	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20	<0.20
	<b>08/19/15</b>	<b>&lt;0.00821</b>	<b>&lt;0.00902</b>	<b>0.118</b>	<b>&lt;0.0120</b>	<b>0.00679 J</b>	<b>&lt;0.0116</b>	<b>0.00315 J</b>	<b>&lt;0.00227</b>	<b>&lt;0.0136</b>	<b>&lt;0.0108</b>	<b>&lt;0.00396</b>	<b>0.0158 J</b>	<b>&lt;0.00850</b>	<b>&lt;0.0148</b>	<b>0.0837 J</b>	<b>0.0346 J</b>	<b>0.0217 J</b>	
<b>PHILLIPS</b>	B-4	02/17/00	-	-	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F
		05/26/00	-	-	13.2	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	dup	05/26/00	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

**TABLE 3**  
**GROUNDWATER ANALYTICAL RESULTS - PAH COMPOUNDS**  
 Willbridge Terminals  
 Portland, Oregon

		1-Methyl-naphthalene	2-Methyl-naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo (a) anthracene	Benzo (a) pyrene	Benzo (b) fluoranthene	Benzo (g,h,i) perylene	Benzo (k) fluoranthene	Chrysene	Dibenz (a,h) anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene	
	08/28/00	-	-	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	
	11/29/00	-	-	2.50	ND	0.620	0.140	ND	ND	ND	ND	ND	1.60	2.54	ND	8.80	4.72	1.24		
	02/20/01	-	-	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	
<b>B-4</b>	09/18/01	-	-	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	
	03/13/02	-	-	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	
	09/26/02	-	-	2.16	ND	ND	ND	ND	ND	ND	ND	ND	0.889	3.42	ND	ND	4.26	0.859		
	03/17/03	-	-	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	
	09/25/03	-	-	2.79	ND	0.857	ND	ND	ND	ND	ND	ND	1.24	5.10	ND	ND	6.24	1.23		
	09/26/06	-	-	2.75	<0.300 <sup>6</sup>	0.670	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	1.00	2.86	<0.200	<1.90 <sup>6</sup>	3.68	1.00		
	03/21/07	-	-	2.39	<0.680	<2.04	<0.0971	<0.0971	<0.0971	<0.0971	<0.0971	0.103	<0.0971	0.420	8.07	<0.0971	<5.34	11.0	1.01	
	09/20/07	-	<0.0500 <sup>6</sup>	1.73	<0.125 <sup>6</sup>	0.316	0.0232	<0.0100	<0.0100	0.0122 <sup>4</sup>	<0.0100	0.0196	<0.0100	0.512	2.55	<0.100	<2.75 <sup>6</sup>	2.21	0.523	
	03/26/08	-	<1.92	5.22	<4.81	4.72	0.169	0.0554	0.0543	<0.577	0.0335	0.299	<0.0288	<1.92	19.2	0.0305	<9.62	27.1	2.02	
	09/24/08	-	<0.481	2.04	<0.481	1.19	0.111	<0.0240	<0.0240	<0.481	<0.0240	0.100	<0.0240	0.988	3.35	<0.0240	<1.68 <sup>6</sup>	5.68	0.927	
dup	09/24/08	-	<0.481	2.14	<0.481	<1.44	0.102	<0.0240	<0.0240	<0.481	<0.0240	0.112	<0.0240	1.00	3.73	<0.0240	<1.92 <sup>6</sup>	8.03	0.972	
	09/21/15	<0.95	<1.2	<0.95	<0.95	<2.4	<0.95	<0.95	<0.95	<0.95	<0.95	<0.95	<0.95	<4.7	<0.95	<0.95	<0.95	<0.95	<4.7	
<b>B-35</b>	02/17/00	-	-	11	ND	5.15	1.19	ND	ND	ND	ND	1.1	ND	8.29	30	ND	ND	35.8	4.33	
	05/26/00	-	-	ND	ND	2.61	ND	ND	ND	ND	ND	ND	ND	2.93	22.5	ND	ND	20.7	1.73	
	08/28/00	-	-	6.77	ND	0.807	0.123	ND	ND	ND	ND	0.127	ND	1.12	13.7	ND	ND	8.35	0.584	
	11/29/00	-	-	2.84	0.360	0.520	0.240	ND	ND	ND	ND	0.200	ND	1.46	6.30	ND	1.22	7.16	0.760	
	02/23/01	-	-	8.44	ND	ND	0.304	ND	0.102	ND	ND	0.330	ND	ND	16.2	ND	ND	17.3	1.15	
	05/17/01	-	-	4.34	ND	0.493	0.103	ND	ND	ND	ND	0.106	ND	0.692	11.3	ND	ND	5.50	0.425	
	09/20/01	-	-	2.92	0.360	0.680	0.200	ND	0.120	ND	ND	0.200	ND	1.20	6.74	ND	1.00	10.0	0.700	
	03/14/02	-	-	3.02	ND	0.620	ND	ND	ND	ND	ND	ND	ND	0.844	7.62	ND	ND	6.78	0.468	
	09/26/02	-	-	4.76	ND	0.740	0.109	ND	ND	ND	ND	ND	ND	1.00	11.6	ND	ND	9.41	0.570	
	03/18/03	-	-	3.46	ND	0.493	ND	ND	ND	ND	ND	ND	ND	0.578	14.3	ND	ND	7.51	0.434	
	09/25/03	-	-	5.36	ND	0.779	ND	ND	ND	ND	ND	ND	ND	0.884	10.2	ND	ND	8.86	0.399	
	03/30/04	-	-	3.52	<0.200	0.456	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	0.419	7.21	<0.200	<2.10	5.18	0.274
	09/28/04	-	-	5.25	<0.200	0.579	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.400	0.662	9.23	<0.200	<2.70	6.80	0.455	
	03/28/05	-	-	<7.25	<1.00	1.13	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<2.00	2.12	15.6	<1.00	<3.50	14.7	1.24	
	09/20/05	-	-	7.51	<0.400	2.37	0.792	<0.400	<0.400	<0.400	<0.400	<0.400	0.797	<0.400	5.150	16.900	<0.400	<3.60	24.9	3.23
	03/14/06	-	-	4.63	<0.495	0.438	0.107	0.0259	0.0402	<0.0198	0.0201	0.0972	<0.0198	0.419	8.83	<0.0198	<2.23	7.60	0.496	
	09/26/06	-	-	5.99	<0.619 <sup>6</sup>	0.609	<0.206	<0.206	<0.206	<0.206	<0.206	<0.206	<0.206	1.03	11.2	<0.206	<2.27 <sup>6</sup>	9.46	0.644	
	03/20/07	-	-	9.21	<1.26	2.21	0.549	0.113	0.133	<0.0971	0.123	0.587	<0.0971	3.04	21.7	<0.0971	<7.28	20.8	2.96	
	09/20/07	-	<0.750 <sup>6</sup>	7.05	<1.00 <sup>6</sup>	0.540	0.086	<0.0500	<0.0500	<0.0500	<0.0500	0.0960	<0.0500	1.03	13.5	<0.0500	<6.00	10.2 <sup>6</sup>	0.616	
	03/27/08	-	<0.962	7.73	<2.40	2.36	0.645	0.144	0.218	<0.962	0.156	0.669	<0.0481	3.92	22.1	<0.0481	<7.21	25.4	2.05	
	09/24/08	-	<0.962	5.27	<1.44 <sup>6</sup>	<3.85 <sup>6</sup>	0.706	0.139	0.176	<0.962	0.124	0.728	<0.0481	3.65	16.0	<0.0481	<4.81 <sup>6</sup>	35.3	2.71	
	03/23/09	-	<0.971	5.15	<1.94	<3.40	0.959	0.220	0.272	<0.971	0.202	0.953	<0.0485	5.79	24.3	0.0623	<1.94	32.9	3.82	
	09/18/09	-	<0.194	4.59	<0.971	<0.971	0.0995	0.0221	0.0277	<0.194	0.021	0.117	<0.00971	0.974	13.1	<0.00971	<0.680	13.2	0.529	
	09/18/09	-	<0.966	4.73	<0.966	0.966	0.125	0.0285	0.0361	<0.193	0.0276	0.145	<0.00966	1.12	13	<0.00966	<0.966	14.0	0.618	
	03/31/10	-	<1.00	4.79	<1.50	<2.00	0.583	0.126	0.164	<1.00	0.118	0.623	<0.0500	3.42	15.3	<0.0500	<2.00	20.0	3.05	
	03/24/11	-	<0.476	4.60	<0.952	0.506	0.0599	<0.0238	<0.0238	0.0476	<0.0238	0.0663	<0.0238	0.575	10.2	<0.0238	<0.952	8.29	<0.476	
	03/24/11	-	<0.952	5.59	<0.952	<0.952	0.101	<0.0476	<0.0476	<0.952	<0.0476	0.124	<0.0476	0.952	11.1	<0.0476	<0.952	10.7	<0.952	
	09/27/11	-	<0.476	5.79	<0.952	0.844	0.135	0.0345	0.0450	<0.476	0.0335	0.147	<0.0238	0.963	8.28	<0.0238	<1.90	11.9	0.681	
	03/28/12	0.77 J	<0.48	3.9	<1.9	0.72 J	0.16	0.039	0.053	<0.048	0.046	0.16	<0.0048	1.4	11	0.0098	2.2 J	10	0.89	
	10/02/12	1.0	<0.19	3.0	<0.96	0.28	<0.0096	<0.0096	<0.0096	<0.19	<0.0096	0.015	<0.0096	0.26	6.0	<0.0096	<0.96	2.8	0.19	
	04/02/13	0.73	<0.11	4.7	<1.1	0.31	0.10	0.018	0.023	<0.11	0.018	0.09	<0.0053	0.55	11	0.0065	<2.1	6.7	0.82	
	09/12/13	<1.0	<1.0	3.9	<2.0	<2.0	0.12	<0.051	<0.051	<1.0	<0.051	0.11	<0.051	<2.0	8.6	<0.051	<2.5	6.5	<1.0	
	03/10/14	<0.52	<0.52	2.7	<0.52	0.58	0.090	0.018	0.032	<0.10	0.011	0.080	<0.0052	0.55	5.9	<0.0052	<0.78	5.8	0.43	
	09/08/14	<0.43	<0.43	3.8	<0.65	1.4	0.210	0.066	0.12	<0.11	0.04	0.210	<0.0089	1.2	6.9	0.019	<0.43	8.1	0.53	
Dup	09/08/14	<0.54	<0.54	3.3	<0.54	0.85	0.084	0.024	0.038	<0.11	0.013	0.089	<0.0054	0.63	7.2	0.0063	<0.54	6.1	0.30	
	03/10/15	0.31	<0.014	2.6	0.24	0.36	0.072	0.017	0.031	<0.011	0.013	0.070	<0.011	0.83	4.4	<0.011	0.59	4.1	0.45	
	<b>09/17/15</b>	<b>0.75</b>	<b>&lt;0.12</b>	<b>2.3</b>	<b>0.45*</b>	<b>0.35*</b>	<b>0.25</b>	<b>&lt;0.095*</b>	<b>0.13</b>	<b>&lt;0.095</b>	<b>&lt;0.095</b>	<b>0.25</b>	<b>&lt;0.095</b>	<b>1.7</b>	<b>7.0</b>	<b>&lt;0.095</b>	<b>0.61</b>	<b>10.0</b>	<b>1.20</b>	
<b>B-36</b>	02/17/00	-	-	0.251	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.537	ND	ND	ND	ND	ND	

**TABLE 3**  
**GROUNDWATER ANALYTICAL RESULTS - PAH COMPOUNDS**  
 Willbridge Terminals  
 Portland, Oregon

		1-Methyl-naphthalene	2-Methyl-naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo (a) anthracene	Benzo (a) pyrene	Benzo (b) fluoranthene	Benzo (g,h,i) perylene	Benzo (k) fluoranthene	Chrysene	Dibenz (a,h) anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene	
	05/26/00	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	08/28/00	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	11/29/00	-	-	0.720	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.34	ND	0.520	0.180	ND	
	02/23/01	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	05/17/01	-	-	0.642	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.91	ND	ND	ND	ND	
	09/20/01	-	-	0.360	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.920	ND	0.320	0.200	ND	
<b>B-36 dup</b>	09/20/01	-	-	0.320	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.880	ND	0.300	0.100	ND	
	03/14/02	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.262	ND	ND	ND	ND	
	09/26/02	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.26	ND	ND	ND	ND	
	03/18/03	-	-	0.240	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.811	ND	ND	ND	ND	
	09/25/03	-	-	0.584	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.22	ND	ND	ND	ND	
	03/30/04	-	-	3.51	<0.200	0.490	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	0.429	6.79	<0.200	<2.10	5.07	0.268
	09/28/04	-	-	0.653	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	1.51	<0.100	<1.60	<0.100	<0.100	<0.100
<b>dup</b>	09/28/04	-	-	0.723	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	1.24	<0.100	<1.35	<0.100	<0.150	<0.100
	03/28/05	-	-	0.728	<0.175	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	1.60	<0.100	<1.25	<0.125	<0.100	<0.100
	09/20/05	-	-	0.274	<0.0200	<0.0300	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	0.606	<0.0200	<0.610	<0.0200	0.0285	<0.0288
	03/14/06	-	-	0.0866	<0.0288	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	0.259	<0.0192	<0.462	<0.0192	<0.0288	<0.0288
	09/26/06	-	-	0.706	<0.198 <sup>6</sup>	<0.0495 <sup>6</sup>	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	1.59	<0.0198	<1.98 <sup>6</sup>	<0.0495 <sup>6</sup>	<0.0693 <sup>6</sup>	<0.0693 <sup>6</sup>
	03/20/07	-	-	<0.245	<0.0686	<0.0686	<0.0392	<0.0196	<0.0196	0.0255	<0.0196	<0.0392	<0.0196	<0.0686	0.724	<0.0196	<1.18	<0.0490	<0.196	<0.0490
	09/20/07	-	-	<0.125 <sup>6</sup>	0.911	<0.250 <sup>6</sup>	<0.250 <sup>6</sup>	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	<0.0500	2.24	<0.0500	<4.25 <sup>6</sup>	<0.250 <sup>6</sup>	<0.250 <sup>6</sup>	<0.250 <sup>6</sup>
	03/27/08	-	-	0.0962	0.187	<0.0962	<0.0481	0.0270	0.0368	<0.192	<0.00962	<0.0481	<0.00962	<0.0481	0.501	<0.00962	<0.385	<0.0962	<0.0962	<0.0962
	09/24/08	-	-	<0.385 <sup>6</sup>	0.708	<0.385 <sup>6</sup>	<0.385 <sup>6</sup>	0.00563	0.00905	<0.0144 <sup>6</sup>	<0.0962	<0.0144 <sup>6</sup>	0.00799	<0.00481	<0.385 <sup>6</sup>	1.63	0.00788	<1.92 <sup>6</sup>	<0.385 <sup>6</sup>	<0.0962
	03/23/09	-	-	<0.0995	0.444	<0.0995	<0.0995	0.0133	0.0188	0.0125	<0.0995	0.0116	0.0181	<0.00498	<0.0995	1.07	0.0138	<0.299	<0.0995	0.170
<b>dup</b>	03/23/09	-	-	<0.0990	0.352	<0.0990	<0.0990	0.0224	0.0313	0.0184	<0.0990	0.0204	0.0331	<0.00495	<0.0990	0.849	0.0205	<0.297	<0.0990	0.198
	09/18/09	-	-	<0.146	0.966	<0.485	<0.485	<0.00485	0.00542	<0.00485	<0.0971	<0.00485	0.00971	<0.00485	<0.485	2.08	<0.00485	<0.777	<0.485	<0.0971
	03/31/10	-	-	<0.0976	0.144	<0.0976	<0.0976	0.0261	0.0370	0.0207	<0.0976	0.0196	0.0317	<0.00516	<0.0976	0.362	0.0301	<0.0976	<0.0976	0.150
	09/23/10	-	-	0.114	1.04	<0.300	<0.100	0.00978	0.0121	0.00760 <sup>12</sup>	<0.100	0.00620 <sup>12</sup>	0.0125 <sup>12</sup>	<0.00500	<0.100	1.99	0.00930 <sup>12</sup>	<0.450	<0.100	<0.100
<b>dup</b>	09/23/10	-	-	<0.100	1.02	<0.300	<0.100	0.0322	0.0332	0.0189 <sup>12</sup>	<0.100	0.0196 <sup>12</sup>	0.0313 <sup>12</sup>	0.00666	<0.100	1.96	0.0241 <sup>12</sup>	<0.450	<0.150	0.106
	03/24/11	-	-	<0.0962	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.0962	<0.00481	<0.0962	<0.0962	<0.0962	
	09/27/11	-	-	<0.0952	0.853	<0.286	<0.286	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.00476	<0.00476	<0.286	1.28	<0.00476	<1.05	<0.286	<0.0952
	03/28/12	<0.049	<0.049	0.12	<0.049	<0.049	<0.0049	<0.0049	<0.0049	<0.049	<0.049	<0.049	<0.049	<0.049	0.29	<0.0049	0.28 J	0.050 J	<0.049	<0.049
<b>dup</b>	03/28/12	0.078 J	<0.049	0.30	<0.049	<0.049	<0.0049	0.0065	0.0081	0.0058	<0.049	0.0052	0.0096	<0.0049	<0.049	0.65	0.0057	<1.0	0.062 J	0.052 J
	10/02/12	0.35	<0.11	0.41	<0.11	<0.22	<0.0055	0.0076	<0.0055	<0.11	<0.0055	0.0095	<0.0055	<0.0055	<0.22	0.69	0.0079	<1.1	<0.22	<0.11
<b>dup</b>	10/02/12	0.42	<0.098	0.44	<0.098	<0.098	<0.0049	<0.0098	<0.0098	<0.20	<0.0098	<0.0049	<0.0098	<0.098	0.89	<0.0098	<0.98	<0.098	<0.098	<0.098
	04/02/13	<0.10	<0.10	0.34	<0.10	<0.10	<0.0052	<0.0052	0.0052	<0.10	<0.0052	<0.0052	<0.0052	<0.0052	<0.10	1.1	<0.0052	<0.42	<0.10	0.1
	09/12/13	<0.52	<0.52	<2.1	<2.1	<2.1	<0.026	<0.026	<0.026	<0.52	<0.026	<0.026	<0.026	<0.026	<2.1	<0.026	<0.77	<2.1	<0.52	<0.52
	03/13/14	<0.10	<0.10	0.18	<0.10	<0.10	<0.0050	<0.0050	<0.0050	<0.10	<0.0050	<0.0050	<0.0050	<0.0050	<0.10	0.32	<0.0050	<0.15	<0.10	<0.10
	09/08/14	1.3	<0.54	0.88	<0.54	<0.54	<0.0054	<0.0054	<0.0054	<0.11	<0.0054	<0.0054	<0.0054	<0.0054	<0.54	2.2	<0.0054	<0.54	<0.54	<0.11
	03/10/15	0.29	0.13	0.37	0.046	0.026	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	0.016	0.77	<0.011	0.30	0.13	0.031
<b>dup</b>	03/10/15	0.057	0.018	0.16	0.020	0.016	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	<0.011	0.025	0.35	0.025	0.14	0.022	0.037
	<b>09/17/15</b>	<b>1.6</b>	<b>&lt;0.12</b>	<b>0.85</b>	<b>0.14*</b>	<b>&lt;0.24*</b>	<b>&lt;0.095</b>	<b>&lt;0.095*</b>	<b>&lt;0.095</b>	<b>&lt;0.095</b>	<b>&lt;0.095</b>	<b>&lt;0.095</b>	<b>&lt;0.095</b>	<b>&lt;0.095</b>	<b>&lt;0.47</b>	<b>2.6</b>	<b>&lt;0.095</b>	<b>0.62</b>	<b>&lt;0.95</b>	<b>&lt;0.47</b>
<b>B-37</b>	02/17/00	-	-	0.0698	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0547
<b>dup</b>	02/17/00	-	-	0.0683	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.0731
	05/26/00	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	08/28/00	-	-	0.124	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	11/29/00	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	02/23/01	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	05/17/01	-	-	0.110	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	03/14/02	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/26/02	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	03/18/03	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
<b>dup</b>	03/18/03	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/25/03	-	-	0.120	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

**TABLE 3**  
**GROUNDWATER ANALYTICAL RESULTS - PAH COMPOUNDS**

		1-Methyl-naphthalene	2-Methyl-naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo (a) anthracene	Benzo (a) pyrene	Benzo (b) fluoranthene	Benzo (g,h,i) perylene	Benzo (k) fluoranthene	Chrysene	Dibenzo (a,h) anthracene	Fluoranthene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene		
	dup	09/25/03	-	0.113	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.118	ND		
		03/31/04	-	-	0.0737	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.320	<0.0300	0.0431		
		09/28/04	-	-	0.142	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.300	<0.100	<0.100		
		03/28/05	-	-	<0.200	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.225	<0.100	<0.100		
		09/20/05	-	-	0.347	<0.0303	<0.0303	<0.0202	<0.0202	<0.0202	<0.0202	<0.0202	<0.0202	<0.0202	<0.0202	<0.202	<0.222	<0.0707	0.0454	
		03/14/06	-	-	0.0725	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	<0.277	<0.0198	<0.0396		
	dup	03/14/06	-	-	<0.0891	<0.0198	0.0217	<0.0198	<0.0198	<0.0198	<0.0198	<0.0198	0.0217	<0.0198	<0.0198	<0.198	<0.277	0.0813	0.0591	
B-37		09/26/06	-	-	0.270	<0.0392 <sup>6</sup>	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.225 <sup>6</sup>	0.0214	0.0208		
		03/20/07	-	-	0.186	<0.0288	0.0199	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.192	0.0517	0.0636		
		09/20/07	-	<0.0150 <sup>6</sup>	0.208	<0.0300 <sup>6</sup>	<0.0500 <sup>6</sup>	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<0.0500 <sup>6</sup>	<0.400 <sup>6</sup>	<0.100	0.0826	0.0789	
		03/27/08	-	<0.0952	0.144	<0.0952	<0.0952	0.0121	0.0146	0.0114	<0.190	<0.00952	0.0142	<0.00952	<0.0952	0.0128	<0.476	<0.0952	<0.0952	
		09/24/08	-	<0.0962	0.116	<0.0962	<0.0962	0.00641	0.00660	0.00510	<0.0962	<0.00481	0.00940	<0.00481	<0.0962	<0.0962	0.00617	<0.192 <sup>6</sup>	<0.0962	<0.0962
	dup	03/20/09	-	<0.0985	<0.0985	<0.0985	<0.0985	<0.0985	<0.00493	<0.00493	<0.0985	<0.00493	<0.00493	<0.00493	<0.0985	<0.0985	<0.0985	<0.0985	<0.0985	
	03/20/09	-	<0.0985	<0.0985	<0.0985	<0.0985	<0.0985	<0.00493	0.00520	<0.00493	<0.0985	<0.00493	0.00530	<0.00493	<0.0985	<0.0985	<0.0985	<0.0985	<0.0985	
		09/18/09	-	<0.0976	<0.0976	<0.0976	<0.0976	<0.00488	<0.00488	<0.0976	<0.00488	<0.00488	<0.00488	<0.00488	<0.0976	<0.0976	<0.0488	<0.146	<0.0976	
		03/31/10	-	<0.100	<0.100	<0.100	<0.100	<0.00500	<0.00500	<0.100	<0.00500	<0.00500	<0.100	<0.00500	<0.100	<0.100	<0.0500	<0.200	<0.100	
	dup	03/31/10	-	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.190	<0.0952	<0.0952	
		09/23/10	-	<0.100	<0.100	<0.100	<0.00500	<0.00500	<0.100	<0.00500	<0.100	<0.00500	<0.100	<0.00500	<0.100	<0.00500	<0.100	<0.100	<0.100	
		03/24/11	-	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.190	<0.0952	<0.0952	
		09/28/11	-	<0.0971	<0.0971	<0.0971	<0.0971	<0.00485	<0.00485	<0.0971	<0.00485	<0.0971	<0.00485	<0.00485	<0.0971	<0.0971	<0.0485	<0.0971	<0.0971	
		03/28/12	<0.050	<0.050	0.081 J	<0.050	<0.050	<0.0050	<0.0050	<0.050	<0.050	<0.0050	<0.0050	<0.0050	<0.20	<0.050	<0.050	<0.20	0.054 J	
B-40		02/17/00	-	-	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	
		05/26/00	-	-	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	
		08/28/00	-	-	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	
		11/29/00	-	-	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	
		02/20/01	-	-	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	
		05/17/01	-	-	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	
		09/26/06 <sup>3</sup>	-	8.45	<1.75 <sup>6</sup>	1.39	0.189	0.0804	<0.100 <sup>6</sup>	<0.500	<0.100 <sup>6</sup>	<0.500	0.337	<0.0500	<0.500	9.06	<0.0500	<213 <sup>9</sup>	13.8	1.42
		03/20/07	-	26.0	<9.95	<9.95	2.01	0.749	<0.498	<4.98	<0.498	3.86	0.298	<4.98	40.5	0.167	389	87.0	16.6	
		09/20/07	-	260	5.71	<1.75 <sup>6</sup>	<2.00 <sup>6</sup>	<0.500	<0.500	<0.500	<0.500 <sup>4</sup>	<0.500	0.507	<0.500	<0.500	6.97	<0.500	141	12.7	1.90
		03/26/08	-	2,080	75.6	<24.0	36.8	6.81	2.36	<1.92	<9.62	<1.92	12.0	0.621	9.75	112	0.589	612	275	33.4
		09/22/08	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
		03/19/09	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
		09/18/09	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
		09/17/13	120	79	<10	<10	<10	0.74	0.45	<0.51	<5.1	<0.51	1.5	<0.25	<10	21	<0.25	<15	26	9.5
		09/08/14	81	59	4.6	<1.1	2.5	0.19	0.11	<0.11	<1.1	<0.054	0.27	<0.054	<1.1	5.1	<0.054	11	9.0	1.6
		03/12/15	1.5	0.37	<0.010	0.086	0.43	0.29	0.21	0.19*	0.25	<0.010	0.57	0.044	<0.010	0.48	0.043	0.97	<0.010	2.0
	09/17/15	120	94	6.1	<0.97*	<2.4*	<0.97	<0.97*	<0.97	<0.97	<0.97	<0.97	<0.97	<0.97	<4.8	7.8	<0.97	13	12	<4.8
OF-1		03/26/08	-	<0.962	<0.962	<0.962	<1.44	0.0702	0.0356	0.0332	<0.192	0.0188	0.142	<0.00962	<0.962	<0.962	0.0207	<0.962	<0.962	
		09/18/09	-	<0.485	<0.485	<0.485	<0.485	<0.00485	<0.00485	<0.0485	<0.071	<0.00485	<0.00485	<0.00485	<0.485	<0.485	<0.0485	<0.485	<0.485	
		03/31/10	-	<0.286	<0.286	<0.286	<0.190	0.0132	0.00498	<0.0476	<0.0952	<0.00476	0.0247	<0.00476	<0.0952	<0.286	<0.00476	<0.286	<0.143	0.251
		09/23/10	-	<0.300	<0.300	<0.300	<0.300	0.0192	0.00897	0.0245 <sup>12,13</sup>	<0.100	<0.00500	0.0339	<0.00500	<0.300	<0.300	<0.0755 <sup>12</sup>	<0.300	<0.300	
		03/24/11	-	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.0952	<0.00476	<0.00476	<0.00476	<0.00476	<0.0952	<0.0952	<0.00476	<0.0952	<0.0952	
		09/28/11	-	<0.0980	<0.0980	<0.0980	<0.0980	<0.00490	<0.00490	<0.0980	<0.00490	<0.00490	<0.00490	<0.00490	<0.0980	<0.0980	<0.00490	<0.0980	<0.0980	
P-1		03/18/03	-	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	
		03/31/04	-	-	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0405	
		09/26/06	-	-	0.0137	<0.0102	<0.0102	<0.00508	<0.00508	<0.00508	<0.0102	<0.00508	0.00513	<0.00508	<0.0102	0.0225	<0.00508	<0.0457 <sup>6,7</sup>	0.0468	0.0195
		03/20/07	-	-	<0.00976	<0.00976	<0.00976	<0.00488	<0.00488	<0.00976	<0.00488	<0.00488	<0.00488	<0.00976	<0.00976	<0.00488	<0.0341	0.0139	0.0134	
		09/20/07	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
		Well Abandoned																		
P-1A		01/28/08	-	<0.0952	<0.0952	<0.0952	<0.0952	0.00818	<0.00476	0.00818	<0.0952	0.00881	0.0143	<0.00476	<0.0952	<0.0952	<0.00476	0.572	<0.0952	
		03/26/08	-	<0.0962	<0.0962	<0.0962	<0.0962	<0.00962	<0.00962	<0.192	<0.00962	<0.00962	<0.00962	<0.00962	<0.0962	<0.0962	<0.00962	<0.0962	<0.0962	
		06/25/08	-	<0.0971	<0.0971	<0.0971	<0.0971	<0.00485	<0.00485	<0.0485	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	<0.0971	<0.00485	<0.0971	<0.0971	

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**GROUNDWATER ANALYTICAL RESULTS - PAH COMPOUNDS**  
 Willbridge Terminals  
 Portland, Oregon

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		1-Methyl-naphthalene	2-Methyl-naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo (a) anthracene	Benzo (a) pyrene	Benzo (b) fluoranthene	Benzo (g,h,i) perylene	Benzo (k) fluoranthene	Chrysene	Dibenz (a,h) anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Naphthalene	Phenanthrene	Pyrene	
	11/29/00	-	-	0.800	0.100	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.02	ND	2.60	1.06	ND		
	02/23/01	-	-	ND	ND	0.124	ND	ND	ND	ND	ND	ND	ND	ND	3.28	ND	ND	1.64	ND		
	05/17/01	-	-	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	
	09/18/01	-	-	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	
	09/26/02	-	-	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	
	03/18/03	-	-	ND	ND	ND	1.08	ND	ND	2.54	ND	1.89	ND	ND	36.0	ND	ND	55.0	11.3		
	09/25/03	-	-	5.52	ND	1.13	ND	ND	ND	ND	ND	ND	ND	ND	9.61	ND	4.71	10.7	1.31		
	03/31/04	-	-	3.15	<0.400	0.921	<0.400	<0.400	<0.400	<0.400	<0.400	<0.400	<0.400	<0.400	5.18	<0.400	<2.50	5.49	1.06		
	09/28/04	-	-	4.54	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	6.51	<0.500	<3.25	5.66	<0.500		
<b>U-5</b>	03/28/05	-	-	4.25	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	6.87	<1.00	<2.50	7.64	<1.00		
	09/20/05	-	-	3.69	<0.192	0.545	<0.192	<0.192	<0.192	<0.192	<0.192	<0.192	<0.192	<0.192	5.80	<0.192	<2.31	6.37	0.443		
	03/14/06	-	-	3.50	<0.784	<0.490	<0.196	<0.196	<0.196	<0.196	<0.196	<0.196	<0.196	<0.196	5.78	<0.196	<3.04	6.09	0.374		
	09/26/06 <sup>8</sup>	-	-	204	<72.8 <sup>6</sup>	108	9.40	5.79	<6.07 <sup>6</sup>	28.3	<7.28 <sup>6</sup>	23.3	3.69	27.6	374	2.33	<121 <sup>6,7</sup>	996	119		
	03/20/07	-	-	4.58	<1.17	<2.14	0.189	0.0981	<0.0971	0.420	<0.0971	0.403	0.0577	<0.388	12.5	0.0459	<5.44	11.6	2.56		
	09/20/07	-	19.2	12.4	<5.00 <sup>6</sup>	<15.0 <sup>6</sup>	0.548	<0.500	<0.500	1.20 <sup>9</sup>	<0.500	0.999	<0.500	<5.00 <sup>6</sup>	19.9	<0.500	<12.0 <sup>6</sup>	37.6	8.00		
	06/25/08	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	09/24/08	-	2.68	11.4	<4.81	<12.06	1.020	0.483	<0.4816	<4.81	<0.240	2.25	0.276	<4.81	22.5	<0.240	<7.216	63.1	10.20		
	03/19/09	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	
	4/3/13	52	<0.16	2.5	<1.6	0.31	0.029	<0.081	<0.081	<0.16	<0.081	0.064	0.0081	<0.16	4.3	<0.0081	<1.6	4.0	0.71		
<b>U-13</b>	09/28/04	-	-	<1.50	<1.00	1.30	1.76	1.36	1.13	0.663	1.08	1.31	<0.400	3.84	1.54	0.654	11.5	4.44	3.51		
	03/30/12	430	430	11	<4.9	11	17	13	25	5.6 J	<0.49	15	1.9	54	18	5.6	420	33	38		
<b>U-14</b>	09/27/06	-	-	0.329	<0.202 <sup>6</sup>	<0.0303 <sup>6</sup>	<0.0202	<0.0202	<0.0202	<0.0202	<0.0202	<0.0202	<0.0202	0.0242	0.750	<0.0202	<4.14 <sup>6</sup>	0.189	0.0400		
	03/21/07	-	-	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	0.0284	<0.0194	<0.369	0.0292	<0.0194		
	09/19/07	-	<0.498 <sup>6</sup>	<0.498 <sup>6</sup>	<0.498 <sup>6</sup>	<0.4995	0.00719	<0.00498	<0.00498	<0.00995	<0.00498	0.0114	<0.00498	<0.00995	1.58	<0.00498	<2.40 <sup>6</sup>	<0.0995	<0.0995		
	03/25/08	-	<0.0962	<0.0962	<0.0962	<0.0962	<0.00962	<0.00962	<0.00962	<0.192	<0.00962	0.00967	<0.00962	<0.0962	<0.0962	<0.0962	<0.144	<0.0962	<0.0962		
	09/25/08	-	<0.0962	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<0.00481	<0.0962	<0.0962	<0.0962	<0.00481	<3.37 <sup>6</sup>	<0.0962	<0.0962		
	03/18/09	-	<0.0962	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<0.00481	<0.0962	<0.0962	<0.0962	<0.00481	<0.0962	<0.0962	<0.0962		
	09/22/09	0.0042 <sup>4,10</sup>	0.015 <sup>4</sup>	0.0019 <sup>4,10</sup>	0.0047 <sup>10</sup>	0.0036 <sup>4,10</sup>	0.012	0.046 <sup>4</sup>	0.090 <sup>4</sup>	0.0093 <sup>10</sup>	0.0076 <sup>10</sup>	0.010	<0.0095	0.016 <sup>4</sup>	0.0023 <sup>4,10</sup>	0.046	<0.0095	0.017 <sup>4</sup>	0.0098 <sup>4</sup>		
	09/21/10	<0.0060	0.032	<0.00067	<0.00068	<0.0012	<0.0017	<0.00067	<0.0019	<0.0016	<0.00067	<0.0017	<0.0017	0.0045 <sup>10</sup>	0.0045 <sup>10</sup>	<0.0014	0.011 <sup>10</sup>	0.012 <sup>10</sup>	0.0022 <sup>10</sup>		
	03/22/11	<0.0060	<0.012	<0.00067	<0.00068	<0.0012	<0.0017	<0.00067	<0.0019	<0.0016	<0.00067	<0.0017	<0.0017	<0.0018	<0.0036	<0.0014	0.0040 <sup>10</sup>	<0.0036	<0.0019		
	09/28/11	<0.012	<0.023	<0.0013	<0.0013	<0.0025	<0.0034	<0.0013	<0.0038	<0.0032	<0.0013	<0.0034	<0.0034	<0.0036	<0.0072	<0.0028	0.0079 <sup>4,10</sup>	<0.0072	<0.0038		
	04/02/12	<0.049	<0.049	<0.049	<0.049	<0.049	<0.0049	<0.0049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.0049	<0.049	<0.049	<0.049		
	10/02/12	<0.10	<0.10	<0.10	<0.10	<0.052	<0.052	<0.052	<0.10	<0.0502	<0.0502	<0.0502	<0.10	<0.0502	<0.0502	<0.10	<0.0502	<0.10	<0.10		
<b>U-15</b>	09/27/06	-	-	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0784 <sup>6</sup>	<0.0196	0.0261		
	03/21/07	-	-	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.0196	<0.123	<0.0196	<0.0196	
	09/19/07	-	<0.0990	<0.0990	<0.0990	<0.0990	0.00654	0.00874	0.00875	<0.0990	0.00808	0.00725	<0.00495	<0.0990	<0.0990	0.00785	<0.0990	<0.0990	<0.0990		
	03/25/08	-	<0.0962	<0.0962	<0.0962	<0.0962	<0.00962	<0.00962	<0.00962	<0.192	<0.00962	0.00962	<0.00962	<0.00962	<0.00962	<0.00962	<0.00962	<0.00962	<0.00962		
	09/25/08	-	<0.0962	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<0.00481	<0.0962	<0.0962	<0.0962	<0.00481	<0.0962	<0.0962	<0.0962		
	03/17/09	-	0.122	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<0.00481	<0.0962	<0.0962	<0.0962	<0.00481	1.85	<0.0962	<0.0962		
	09/21/09	0.024 <sup>4</sup>	0.042 <sup>4</sup>	0.0033 <sup>4,10</sup>	<0.0095	0.0047 <sup>4,10</sup>	0.015	0.046 <sup>4</sup>	0.086 <sup>4</sup>	0.013	0.0081 <sup>10</sup>	<0.0095	<0.0095	0.020 <sup>4</sup>	0.034 <sup>4</sup>	0.049	0.055	0.027 <sup>4</sup>	0.012 <sup>4</sup>		
	09/20/10	0.025	0.049	0.0053 <sup>10</sup>	<0.00068	0.0058 <sup>10</sup>	<0.0017	<0.00067	0.015	<0.0016	0.020	0.0081 <sup>10</sup>	<0.0017	0.019	<0.0036	<0.0014	0.049	0.014	0.016		
	03/21/11	0.097	0.13	<0.00067	<0.00068	<0.0012	<0.0017	<0.00067	<0.0019	<0.0016	<0.00067	<0.0017	<0.0017	<0.0018	<0.0036	<0.0014	4.6	<0.0036	<0.0019		
	09/27/11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
	03/30/12	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.0049	<0.0049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	0.099	<0.049	<0.049	
<b>dup</b>	03/30/12	0.048 J	<0.048	<0.048	<0.048	<0.048	<0.048	<0.0048	<0.0048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<0.048	<1.0	<0.048	<0.048		
	09/27/2012	<0.097	<0.097	<0.097	<0.097	<0.097	<0.097	<0.097	<0.097	<0.097	<0.097	<0.097	<0.097	<0.097	<0.097	<0.097	<0.097	<0.097	<0.097	<0.097	
<b>U-16</b>	09/27/06	-	-	0.577	<0.303	<0.202	<0.202	<0.202	<0.202	<0.202	<0.202	<0.202	<0.202	<0.202	1.14	<0.202	<1.92 <sup>6</sup>	0.655	<0.202		
	03/21/07	-	-	<0.583	<0.233	<0.311	<0.0777	<0.0777	<0.0777	<0.0777	<0.0777	<0.0779	<0.0777	<0.0777	1.50	<0.0777	<1.71	0.824	0.339		
	09/19/07	-																			

**TABLE 3**  
**GROUNDWATER ANALYTICAL RESULTS - PAH COMPOUNDS**  
 Willbridge Terminals  
 Portland, Oregon

		1-Methyl-naphthalene	2-Methyl-naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo (a) anthracene	Benzo (a) pyrene	Benzo (b) fluoranthene	Benzo (g,h,i) perylene	Benzo (k) fluoranthene	Chrysene	Dibenz (a,h) anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene	
	09/21/09	4.5 <sup>4</sup>	0.068 <sup>4</sup>	0.55 <sup>4</sup>	0.15	0.067 <sup>4</sup>	<0.0095	0.043 <sup>4</sup>	0.081 <sup>4</sup>	<0.0095	<0.0095	<0.0095	<0.0095	0.039 <sup>4</sup>	1.2 <sup>4</sup>	0.044	0.44	0.15 <sup>4</sup>	0.049 <sup>4</sup>	
	03/16/10	-	0.042	0.37	0.11	0.055	0.0065 <sup>10</sup>	<0.014	<0.014	<0.014	<0.014	<0.014	<0.014	0.011 <sup>10</sup>	0.80	<0.014	0.58	0.090	0.021	
	09/20/10	7.6	<0.012	0.44	0.14	0.039	<0.0017	<0.00066	<0.0019	<0.0016	<0.00066	<0.0017	<0.0017	0.011 <sup>10</sup>	0.88	<0.0014	0.69	0.063	0.022	
	03/21/11	5.3	<0.012	0.34	0.071	0.039	<0.0017	<0.00067	<0.0019	<0.0016	<0.00067	<0.0017	<0.0017	0.014	0.49	<0.0014	<0.0014	0.060	0.021	
	09/27/11	7.0	0.037	0.29	0.080	0.035	<0.0034	<0.0013	<0.0038	<0.0032	<0.0013	<0.0034	<0.0034	0.0098 <sup>10</sup>	0.50	<0.0028	0.64 <sup>4</sup>	0.14	0.016 <sup>10</sup>	
	03/30/12	4.6	<0.049	0.30	<0.49	<0.049	<0.0049	<0.0049	<0.049	<0.049	<0.0049	<0.0049	<0.0049	<0.049	0.45	<0.0049	<1.0	0.058 J	<0.049	
	09/27/2012	1.2	<0.097	<0.097	<0.097	<0.097	<0.097	<0.097	<0.097	<0.097	<0.097	<0.097	<0.097	<0.19	<0.097	<0.097	<0.097	<0.097	<0.097	
<b>U-17</b>	09/27/06	-	-	<0.404 <sup>6</sup>	<0.404 <sup>6</sup>	<0.404 <sup>6</sup>	0.0241	<0.0202	<0.0202	<0.0202	<0.0202	<0.0221	<0.0202	<0.0202	0.698	<0.0202	<1.62 <sup>6</sup>	0.406	0.124	
<b>U-17</b>	03/21/07	-	-	<0.713	<0.238	0.113	<0.0792	<0.0792	<0.0792	<0.0792	<0.0792	<0.0792	<0.0792	0.135	<0.0792	<3.72	1.57	0.327		
	09/19/07	-	<0.490 <sup>6</sup>	<0.490 <sup>6</sup>	<0.490 <sup>6</sup>	<0.490 <sup>6</sup>	0.0291	0.00937	0.00833	<0.0980	0.00666	0.0272	<0.0490	<0.490 <sup>6</sup>	0.739	<0.00490	<2.45 <sup>6</sup>	<0.490 <sup>6</sup>	0.553	
	03/25/08	-	<0.385	0.920	<0.385	<0.385	0.0306	<0.00962	<0.00962	<0.192	<0.00962	0.0300	<0.00962	<0.385	1.70	<0.00962	2.40	1.46	<0.385	
	09/25/08	-	<0.385 <sup>6</sup>	0.434	<0.385 <sup>6</sup>	<0.0962	0.0224	<0.00481	<0.00481	<0.0962	<0.00481	0.0224	<0.00481	<0.0962	0.751	<0.00481	<1.15 <sup>6</sup>	0.922	0.147	
	03/17/09	-	<0.478	<1.91	<1.91	<0.478	0.0226	0.00556	<0.0478	<0.0957	<0.00957	0.0234	<0.00478	<0.478	<1.91	<0.00478	<1.44	1.72	0.251	
	09/21/09	66.4 <sup>4</sup>	0.14 <sup>4</sup>	0.89 <sup>4</sup>	0.27	0.16 <sup>4</sup>	0.048	0.051 <sup>4</sup>	0.089 <sup>4</sup>	0.013	0.011	0.031	<0.0095	0.23 <sup>4</sup>	1.4 <sup>4</sup>	0.048	1.4	1.7 <sup>4</sup>	0.26 <sup>4</sup>	
	03/16/10	-	0.14	1.3	0.30	0.17	0.028	0.0058 <sup>10</sup>	0.0038 <sup>10</sup>	<0.014	0.0030 <sup>10</sup>	0.021	<0.014	0.13	1.7	<0.014	1.6	1.5	0.18	
	09/20/10	40.7	<0.012	1.1	0.23	0.098	0.026	<0.00066	<0.0019	<0.0016	<0.00066	0.022	<0.0017	0.14	1.7	<0.0014	1.7	0.52	0.18	
	03/21/11	36.3	0.24	0.89	0.23	0.096	0.023	<0.00067	<0.0019	<0.0016	<0.00067	0.018	<0.0017	0.12	1.4	<0.0014	<0.0014	1.3	0.20	
	09/27/11	16.6	0.098	0.48	0.12	0.058	0.014 <sup>10</sup>	<0.0013	<0.0038	<0.0032	<0.0013	0.012 <sup>10</sup>	<0.0034	0.075	0.85	<0.0028	0.79 <sup>4</sup>	0.40	0.11	
	03/30/12	80	<0.19	1.1	<2.4	0.12	0.025	<0.019	<0.019	<0.019	<0.019	0.027	<0.019	0.12	2.3	<0.019	3.1 J	1.5	0.21 J	
	09/27/2012	43	<0.097	0.64	<0.97	<0.097	<0.097	<0.097	<0.097	<0.097	<0.097	<0.19	<0.19	0.11	<0.097	<0.97	1.4	0.16		
<b>U-18</b>	03/21/07	-	-	1.60	<0.385	<0.192	<0.192	<0.192	<0.192	<0.192	<0.192	<0.192	<0.192	<0.192	5.40	<0.192	<3.08	1.76	0.277	
	09/19/07	-	<4.98 <sup>6</sup>	<4.98 <sup>6</sup>	<4.98 <sup>6</sup>	<4.98 <sup>6</sup>	<0.0249	<0.0249	<0.0249	<0.498	<0.0249	0.0338	<0.0249	<4.98 <sup>6</sup>	5.91	<0.0249	<4.98 <sup>6</sup>	<4.98 <sup>6</sup>	<0.498	
	03/25/08	-	<0.192	0.732	<0.192	<0.192	<0.0385	<0.0192	<0.0192	<0.385	<0.0192	<0.0385	<0.0192	<0.192	2.31	<0.0192	<0.962	0.439	<0.192	
	09/25/08	-	<0.481	1.07	<0.481	<0.481	<0.0240	<0.0240	<0.0240	<0.481	<0.0240	0.0250	<0.0240	<0.481	2.86	<0.0240	<1.44	0.819	<0.481	
	03/17/09	-	<0.0962	<0.0962	<0.0962	<0.0962	<0.0962	<0.0793	<0.00481	<0.0962	<0.00481	<0.0144	<0.00481	<0.0962	0.00642	<0.144	<0.0962	<0.144		
	09/22/09	4.2 <sup>4</sup>	0.12 <sup>4</sup>	2.6 <sup>4</sup>	0.47	0.27 <sup>4</sup>	0.16	0.15 <sup>4</sup>	0.16 <sup>4</sup>	0.087	0.063	0.13	<0.0096	0.27 <sup>4</sup>	8.4 <sup>4</sup>	0.097	0.79	2.0 <sup>4</sup>	0.39 <sup>4</sup>	
	09/21/10	8.1	0.086	1.0	0.23	0.11	<0.0017	<0.00066	<0.0019	<0.0016	<0.00066	<0.0017	<0.0017	0.039	5.8	<0.0014	1.2	1.5	0.045	
	03/21/11	30.6	0.079	1.6	0.33	0.099	0.0092 <sup>10</sup>	0.0089 <sup>10</sup>	0.0065 <sup>10</sup>	0.0093 <sup>10</sup>	0.0053 <sup>10</sup>	0.0082 <sup>10</sup>	0.0058 <sup>10</sup>	0.030	4.8	0.0086 <sup>10</sup>	<0.0014	1.5	0.056	
	09/28/11	1.5	0.086	1.7	0.41	0.22	0.019 <sup>10</sup>	<0.0013	<0.0038	<0.0032	<0.0013	0.019 <sup>10</sup>	<0.0034	0.035	5.7	<0.0028	1.1 <sup>4</sup>	2.2	0.068	
	03/30/12	2.4	<0.049	0.19	<0.049	<0.049	<0.0049	<0.0049	<0.0049	<0.049	<0.0049	<0.0049	<0.0049	0.67	<0.0049	<1.0	0.12	<0.049		
	09/27/2012	2.0	<0.095	1.2	<0.95	<0.095	<0.095	<0.095	<0.095	<0.095	<0.095	<0.095	<0.095	4.4	<0.095	<0.95	1.5	<0.095		
<b>U-19</b>	03/21/07	-	-	<0.175	<0.0583	<0.175	0.0606	<0.0388	<0.0388	<0.0388	<0.0388	0.0878	<0.0388	0.222	0.451	<0.0388	<5.83	0.239		
	09/19/07	-	<0.396	<0.396	<0.396	<0.396	<0.0198	<0.0198	<0.0198	<0.396	<0.0198	<0.0198	<0.0198	<0.396	<0.0198	<4.75 <sup>6</sup>	<0.396	<0.396		
	03/25/08	-	<0.0962	<0.0962	<0.0962	<0.0962	0.0294	0.0167	0.0165	<0.192	0.0138	0.0406	0.0124	<0.0962	0.108	0.00984	<1.92	<0.0962	<0.0962	
	04/02/12	<0.048	<0.048	<0.048	<0.048	<0.048	<0.0048	<0.0048	<0.0048	<0.048	<0.0048	<0.0048	<0.0048	<0.048	<0.048	<0.0048	0.055 J	<0.048	<0.048	
<b>U-20</b>	03/20/07	-	-	1.42	<0.505	<0.233	<0.0777	<0.0777	<0.0777	<0.0777	<0.0777	0.0921	<0.0777	0.0954	3.49	<0.0777	<5.44	4.56	0.195	
	09/19/07	-	<0.493 <sup>6</sup>	1.01	<0.591 <sup>6</sup>	<0.394 <sup>6</sup>	<0.00985	<0.00985	<0.00985	<0.197	<0.00985	<0.00985	<0.00985	<0.197	2.78	<0.00985	<2.96 <sup>6</sup>	1.50	<0.197	
	03/25/08	-	<0.0962	0.720	<0.240	<0.0962	<0.0192	<0.00962	<0.00962	<0.192	<0.00962	<0.0192	<0.00962	<0.0962	1.71	<0.00962	<1.25	1.10	<0.0962	
dup	03/25/08	-	<0.0962	0.772	<0.288	<0.0962	<0.0192	<0.00962	<0.00962	<0.192	<0.00962	<0.0192	<0.00962	<0.0962	1.91	<0.00962	<1.30	1.10	<0.0962	
	09/25/08	-	<0.0962	0.806	<0.385 <sup>6</sup>	<0.0962	0.0424	0.0229	0.0164	<0.0962	0.0147	0.0474	0.00597	0.169	1.42	0.0139	<1.44 <sup>6</sup>	0.259	0.190	
	03/17/09	-	<0.0966	0.655	<0.193	<0.145	<0.00483	<0.00483	<0.00483	<0.0966	<0.00483	<0.00483	<0.00483	<0.0966	1.46	<0.00483	<0.386	1.11	<0.0966	
	09/21/09	0.49 <sup>4</sup>	0.080 <sup>4</sup>	1.5 <sup>4</sup>	0.36	0.1 <sup>4</sup>	0.0093 <sup>10</sup>	0.044 <sup>4</sup>	0.083 <sup>4</sup>	0.0092 <sup>10</sup>	<0.0095	0.0098	<0.0095	0.029 <sup>4</sup>	3.2 <sup>4</sup>	0.045	0.50	3.0 <sup>4</sup>	0.050 <sup>4</sup>	
	03/16/10	-	0.038	1.3	0.34	0.14	<0.014	<0.014	<0.014	<0.014	<0.014	<0.014	<0.014	<0.014	0.0083 <sup>10</sup>	3.4	<0.014	0.54	2.9	0.035
	09/21/10 <sup>14</sup>	<0.0062	<0.012	1.1	0.30	0.12	<0.0018	<0.00069	<0.0020	<0.0017	<0.00069	<0.0018	<0.0018	<0.0098 <sup>10</sup>	2.5	<0.0015	0.5	2.2	0.032	
	03/21/11	0.14	0.036	0.83	0.23	0.18	0.034	0.039	0.024	0.040	0.022	0.036	0.0054 <sup>10</sup>	0.076	1.7	0.023	<0.0014	1.8	0.15	
	09/28/11	0.048	0.028 <sup>10</sup>	0.78	0.20	0.065	<0.0035	<0.0013	<0.0038	<0.0033	<0.0013	<0.0035	<0.0035	<0.0071 <sup>10</sup>	1.8	&lt				

**TABLE 3**  
**GROUNDWATER ANALYTICAL RESULTS - PAH COMPOUNDS**  
 Willbridge Terminals  
 Portland, Oregon

		1-Methyl-naphthalene	2-Methyl-naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo (a) anthracene	Benzo (a) pyrene	Benzo (b) fluoranthene	Benzo (g,h,i) perylene	Benzo (k) fluoranthene	Chrysene	Dibenz (a,h) anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene	
	09/25/08	-	<0.0962	0.896	<0.385 <sup>6</sup>	<0.385 <sup>6</sup>	0.00645	0.00614	<0.00481	<0.0962	<0.00481	0.0106	<0.00481	<0.0962	1.95	0.00500	<0.962 <sup>6</sup>	1.86	<0.0962	
	03/17/09	-	<0.0962	0.789	<0.337	<0.0962	0.0223	0.0122	0.00868	<0.0962	0.00723	0.0286	<0.00481	0.120	1.47	0.00616	<0.433	0.170	0.172	
	09/22/09	0.23 <sup>4</sup>	0.11 <sup>4</sup>	1.7 <sup>4</sup>	<0.0095	0.14 <sup>4</sup>	0.038	0.049 <sup>4</sup>	0.087 <sup>4</sup>	0.012	0.0092 <sup>10</sup>	0.031	<0.0095	0.29 <sup>4</sup>	3.0 <sup>4</sup>	0.047	1.3	0.37 <sup>4</sup>	0.27 <sup>4</sup>	
	03/16/10	-	0.030	0.58	0.18	0.090	0.025	0.011 <sup>10</sup>	0.0097 <sup>10</sup>	0.0064 <sup>10</sup>	0.0053 <sup>10</sup>	0.023	<0.016	0.12	1.2	0.0047 <sup>10</sup>	0.69	0.074	0.13	
	09/21/10 <sup>14</sup>	14.8	<0.012	0.25	0.10	0.045	<0.0017	<0.00067	<0.0019	<0.0016	<0.00067	0.0034 <sup>10</sup>	<0.0017	0.035	0.48	<0.0014	1.1	0.31	0.029	
	03/21/11	0.072	0.024	0.96	0.22	0.092	0.016	<0.00067	0.0028 <sup>10</sup>	<0.0016	0.0022 <sup>10</sup>	0.017	<0.0017	0.11	2.2	<0.0014	<0.0014	0.089	0.13	
	09/28/11	0.051	0.047	1.1	0.38	0.12	0.022 <sup>10</sup>	<0.0013	<0.0038	<0.0032	<0.0013	0.023 <sup>10</sup>	<0.0034	0.13	2.6	<0.0028	1.3 <sup>4</sup>	0.23	0.15	
	dup	09/28/11	0.074	0.058	1.3	0.41	0.13	0.023 <sup>10</sup>	<0.0013	<0.0038	<0.0032	<0.0013	0.025 <sup>10</sup>	<0.0034	0.13	2.7	<0.0028	1.6 <sup>4</sup>	0.23	0.15
<b>U-21</b>	03/29/12	<0.048	<0.048	0.41	<0.24	<0.048	0.013	0.0065	0.0056	<0.048	0.0052	0.021	<0.0048	0.089 J	0.99	<0.0048	<1.0	0.052 J	0.10	
	09/27/2012	<0.097	<0.097	0.88	<0.97	<0.097	<0.097	<0.097	<0.097	<0.097	<0.097	<0.097	<0.097	<0.19	<0.097	2.0	<0.097	<0.97	0.12	<0.097

**NOTES:**

Data collected prior to 4Q11 are presented as they were reported by previous consultants

J = result is less than reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value

B = compound was found in the blank sample

\* = Relative Percent Difference of lab control sample and lab control sample duplicate exceed the control limits

- = Not sampled, not analyzed, not applicable

µg/L = Micrograms per Liter

NA = Not available

ND = Not detected at or above method detection limit

2/00 and 5/00 data from IT Corporation

8/00, 11/00, 2/01 and 5/01 data from KHM Environmental Management, Inc.

IT Corp Data recorded as reported in Second Quarter 2000 Report

NS/F = Not sampled floating product present

NS/S = Not sampled sheen present

<sup>1</sup> = Sample rerun outside of hold time due to low surrogate recovery reported in the initial sample as a result of an extraction error.

<sup>2</sup> = Sample ID was misidentified by the laboratory as D-2

<sup>3</sup> = Analytical results are from a re-sample due to container breakage at the laboratory of the sample collected on 3/14/06.

<sup>4</sup> = Analyte was detected in the associated Method Blank.

<sup>5</sup> = Naphthalene was detected in the Method Blank at 0.0165 µg/L. Sample has a detection for naphthalene at 0.0468 µg/L. The result has been qualified and should be considered an estimate. Unable to perform corrective action due to insufficient volume left.

<sup>6</sup> = The reporting limit for this analyte was raised due to matrix interference or sample matrix effects.

<sup>7</sup> = Analyte was detected in the blank at greater than one-half of the MRL, but samples are ND.

<sup>8</sup> = The reporting limit was raised due to dilution necessary for analysis. Sample contains high levels of reported analyte, non-target analyte, and/or matrix interference.

<sup>9</sup> = Analyte was detected in the associated method blank. Analyte concentration in the sample is greater than 10 times the concentration found in the method blank.

<sup>10</sup> = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

<sup>11</sup> = Analysis shows low surrogate recoveries. Lab notes do not indicate any extraction issues. Insufficient volume for re-extraction. The results should be considered estimated.

<sup>12</sup> = Analyte was detected in the batch blank between the MRL and 1/2 the MRL. See lab case narrative for amounts. Result should be considered an estimate.

<sup>13</sup> = Value reported represents total Benzo(b+k) fluoranthene.

<sup>14</sup> = Samples U-20 and U-21 were identified incorrectly (labels switched) in the field.

dup\* = duplicate for B-30 submitted as blind duplicate labeled as B-50

dup\*\*= duplicate for B-30 submitted as blind duplicate labeled as B-31

dup\*\*\*= duplicate for B-30 submitted as blind duplicate labeled as B-130

PAHs by EPA Method 8270C-SIM

**TABLE 4**  
**GROUNDWATER ANALYTICAL RESULTS - TOTAL METALS**  
 Willbridge Terminals  
 Portland, Oregon

Sample I.D.	Sample Date	Arsenic (µg/L)	Barium (µg/L)	Cadmium (µg/L)	Chromium (µg/L)	Copper (µg/L)	Lead (µg/L)	Manganese (µg/L)	Mercury (µg/L)	Selenium (µg/L)	Silver (µg/L)	Zinc (µg/L)
<b>CHEVRON</b>												
B-9	05/23/00	17.7	139	ND	17.6	28.6	8.48	NA	ND	1.23	ND	61.6
	08/25/00	11.6	53.4	ND	2.70	7.50	2.14	NA	ND	ND	ND	22.8
	11/30/00	10.8	153	1.49	15.9	35.4	11.4	NA	ND	1.25	ND	82.3
	02/22/01	17.3	46.0	ND	ND	2.13	ND	NA	ND	1.27	ND	ND
	05/17/01	20.8	70.6	ND	4.44	6.34	2.41	NA	ND	ND	ND	16.1
	09/19/01	16.1	75.3	ND	2.56	9.93	2.66	NA	ND	ND	ND	13.6
	03/21/02	10.5	48.8	ND	2.57	6.83	3.98	NA	ND	ND	ND	50.6
	09/24/02	18.5	46.9	ND	ND	ND	ND	NA	ND	ND	ND	ND
	03/20/03	9.92	40.1	ND	1.65	4.21	3.17	NA	ND	ND	ND	28.3
	09/30/03	9.05	137	1.36	8.12	28.5	15.5	NA	ND	ND	ND	53.2
	03/30/04	38.4	349	3.82	39.5	99.1	46.7	NA	<0.200	1.47	<1.00	331
	03/08/05	30.5	59.2	<1.00	<1.00	<2.00	<1.00	NA	<0.200	<2.00	<1.00	7.59
	06/22/05	26.8	48.1	<1.00	<1.00	2.25	<1.00	NA	<0.200	<2.00	<1.00	18.7
	09/21/05	33.8	57.9	<1.00	<1.00	<2.00	<1.00	NA	<0.200	<2.00	<1.00	6.48
	09/26/06	29.8	70.8	<1.00	<1.00	3.15	2.18	NA	<0.200	<1.00	<1.00	33.8
	03/22/07	19.8	72.4	0.352	5.75	16.5	26.8	2,430	0.00989	<1.60	<0.800	71.1
B-9A	09/19/07	7.60	341	<0.0752	54.5	63.8	24.0	2,280	<0.200	<1.60	0.138	177
	03/25/08	20.9	-	<0.380	14.0	21.8	11.5	3,260	<0.200	<5.00	<0.120	72.4
	06/24/08	17.4	262	<0.500	33.4	67.4	26.8	2,900	0.0754	0.722	<1.00	146
dup	06/24/08	18.3	328	<0.500	41.4	77.7	31.1	2,870	0.0884	0.645	<1.00	169
	09/23/08	4.72	104	<0.500	14.0	24.7	8.83	1,720	0.0162	0.385	<1.00	57.3
dup	09/23/08	4.70	114	<0.500	15.7	26.4	9.88	1,840	0.0108	0.311	<1.00	58.9
	01/06/09	1.90	51.6	<0.500	3.00	4.98	2.59	2,220	<0.200	<0.500	<1.00	11.6
dup	01/06/09	1.80	47.6	0.150	2.21	4.10	1.89	2,030	<0.200	0.120	<1.00	10.5
	03/24/09	5.45	45.1	<0.500	<10.0	7.70	3.64	1,270	0.00768	<0.500	<1.00	28.5
	09/22/09	2.21	59.2	<0.500	3.50	<10.0	2.28	2,480	0.00942	<0.500	<1.00	<25.0
dup	09/22/09	1.99	52.2	<0.500	2.55	<10.0	1.76	2,450	0.00579	<0.500	<1.00	<25.0
	03/18/10	5.96	42.0	<1.00	<2.00	<2.00	<1.00	2,260	<0.00500	<1.00	<1.00	<10.0
	03/29/13	25	100	<1.0	4.9	7.5	3.8	3,500	0.0012	<1.0	<1.0	25
	09/16/13	31	140	<1.0	7.8	11	4.2	3,300	0.0020	<1.0	<1.0	31
	09/10/14	19	130	<1.0	16.0	20	9.1	2,700	0.0140	<1.0	<1.0	95
	03/09/15	25	98	<2.0	5.0	<10	4.3	3,300	0.0076	<5.0	<2.0	<35
	<b>09/14/15</b>	<b>32</b>	<b>150</b>	<b>&lt;2.0</b>	<b>7.0</b>	<b>&lt;10</b>	<b>4.4</b>	<b>3,100</b>	<b>0.0033</b>	<b>&lt;5.0</b>	<b>&lt;2.0</b>	<b>&lt;35</b>
B-10	02/18/00	36.7	337	0.840	35.5	57.2	20.2	-	ND	0.53	0.190	96.5
dup	02/18/00	39.4	375	1.41	44.8	74.5	27.0	-	ND	5.25	0.200	123
	05/23/00	35.4	211	ND	26.5	38.4	11.5	-	ND	2.29	ND	63.1
	08/25/00	31.4	65.7	ND	1.99	3.66	1.41	-	ND	1.05	ND	177
	11/30/00	30.7	94.6	ND	5.90	8.00	2.57	-	ND	1.31	ND	16.5
	02/23/01	32.3	61.1	ND	ND	ND	ND	ND	ND	1.84	ND	ND
	05/17/01	39.5	56.7	ND	ND	ND	ND	ND	ND	ND	ND	ND
	09/19/01	23.4	194	ND	24.9	46.6	16.1	-	ND	1.04	ND	79.3

**TABLE 4**  
**GROUNDWATER ANALYTICAL RESULTS - TOTAL METALS**  
 Willbridge Terminals  
 Portland, Oregon

	03/21/02	30.1	64.4	ND	ND	ND	ND	-	ND	ND	ND	ND
	09/24/02	29.0	60.7	ND	ND	ND	ND	-	ND	ND	ND	ND
	03/20/03	32.7	62.0	ND	ND	ND	ND	-	ND	ND	ND	ND
	09/29/03	33.7	82.0	ND	2.85	4.41	2.17	-	ND	1.65	ND	13.2
	03/30/04	33.2	128	<1.00	10.0	16.2	7.83	-	<0.200	<1.00	<1.00	40.2
	03/08/05	39.5	88.1	<1.00	2.31	3.59	3.05	-	<0.200	<2.00	<1.00	11.1
	09/21/05	36.9	64.1	<1.00	<1.00	<2.00	<1.00	-	<0.200	<2.00	<1.00	<5.00
	03/14/06	36.6	65.9	<1.00	<1.00	<2.00	<1.00	-	<0.200	<2.00	<1.00	<5.00
	09/26/06	27.4	90.2	0.080	2.27	<1.60	1.55	-	<5.00	<10.0	<0.0960	10.3
	03/21/07	28.6	80.8	0.080	3.39	4.35	2.15	4,290	0.00618	<1.60	<0.0960	14.2
dup	03/21/07	31.0	87.7	0.104	4.50	5.81	2.90	3,950	0.00833	<1.60	<0.0960	16.9
	09/18/07	36.0	84.3	<0.0752	3.16	5.91	1.87	4,660	<0.200	<1.60	<0.0970	15.1
	03/25/08	32.4	-	<0.380	<1.00	<2.70	<0.540	3,860	<0.200	<5.00	<0.120	<33.0
	09/23/08	32.7	76.4	<5.00	<20.0	<20.0	<10.0	4,340	0.00117	<5.00	<10.0	11.7
	03/24/09	32.2	123	<0.500	<20.0	9.58	3.90	4,570	0.0505	<0.500	<1.00	30.5
dup	03/24/09	32.2	166	<0.500	<20.0	22.1	7.22	4,670	0.0225	<0.500	<1.00	48.2
	09/22/09	31.8	83.5	<0.500	3.06	<10.0	1.26	4,530	<0.00500	<0.500	<1.00	<25.0
	03/18/10	23.0	50.4	<1.00	<2.00	<2.00	<1.00	4,330	<0.00500	<1.00	<1.00	<10.0
	09/21/10	39.9	149	<1.00	10.6	14.8	<10.0	4,560	0.0327	<1.00	<1.00	37.0
	03/23/11	32.4	63.6	<1.00	<2.00	<2.00	<1.00	5,100	<0.00500	<1.00	<1.00	<10.0
	10/03/11	26.6	54.6	<1.00	<2.00	<2.00	<1.00	4,230	<0.00500	<1.00	<1.00	<10.0
	04/05/12	27	63	<0.19	1.8 J	3.3	0.97 J B	3,900	0.00077 J	0.12 J B	<0.018	10
	10/01/12	52	79.0	<10	<20	2.2	<10	4,200	0.3400	<1.0	<1.0	24
	04/01/13	48	85	<1.0	2.0	2.1	1.1	3,700	0.00051	<1.0	<1.0	19
	09/16/13	41	71	<1.0	<2.0	<2.0	<1.0	3,900	0.0023	0.0066	<1.0	<10
dup	09/16/13	42	77	<1.0	<2.0	<2.0	<1.0	4,100	0.0054	<1.0	<1.0	13
	03/17/14	43	97	<1.0	5.0	6.1	2.3	3,500	0.0066	<1.0	<1.0	26
dup	03/17/14	42	94	<1.0	5.0	5.5	2.5	3,500	0.0072	<1.0	<1.0	24
	09/10/14	38	87	<1.0	4.1	4	1.5	3,600	0.0071	<1.0	<1.0	17
dup	09/10/14	38	85	<1.0	4.0	3.8	1.4	3,600	0.0070	<1.0	<1.0	17
	03/18/15	37	150	<2.0	22	24	7.3	4,200	0.016	<5.0	<2.0	71
dup	03/18/15	36	180	<2.0	26	29	8.6	4,600	0.012	<5.0	<2.0	73
	<b>09/14/15</b>	<b>40</b>	<b>92</b>	<b>&lt;4.0</b>	<b>4.2</b>	<b>&lt;20</b>	<b>&lt;4.0</b>	<b>4,000</b>	<b>0.0033</b>	<b>&lt;10.0</b>	<b>&lt;4.0</b>	<b>&lt;70</b>
B-21	09/19/01	30.6	107	ND	8.33	10.7	3.22	-	ND	ND	ND	25.9
	03/21/02	40.5	66.2	ND	ND	ND	ND	-	ND	ND	1.09	8.52
	09/24/02	41.2	69.5	ND	ND	ND	ND	-	ND	ND	ND	ND
	03/20/03	74.0	ND	ND	ND	ND	ND	-	ND	ND	ND	ND
	09/29/03	47.4	75.9	ND	ND	ND	ND	-	ND	ND	ND	ND
	03/29/04	46.9	132	<1.00	9.84	14.1	4.78	-	<2.00	<1.00	<1.00	34
	03/08/05	55.9	179	<1.00	14.3	18.8	5.35	-	<0.200	<2.00	<1.00	37.4
	09/22/05	55.4	88.4	<1.00	<1.00	<2.00	<1.00	-	<0.200	<2.00	<1.00	<5.00
	03/15/06	53.1	86.6	<1.00	1.02	<2.00	<1.00	-	<0.200	<2.00	<1.00	<5.00
	09/26/06	43.2	85.4	<1.00	<1.00	<1.00	<1.00	-	<0.200	<1.00	<1.00	<10.0
	03/21/07	39.0	94.7	0.088	2.13	3.62	2.62	2,760	0.0144	<1.60	<0.0960	13.6
	09/19/07	43.0	130	<0.800	8.80	10.8	3.78	2,740	<0.200	<1.60	<0.800	18.5

**TABLE 4**  
**GROUNDWATER ANALYTICAL RESULTS - TOTAL METALS**  
 Willbridge Terminals  
 Portland, Oregon

	03/26/08	41.2	77.0	<0.380	2.09	3.87	2.00	2,510	0.444	<5.00	<0.120	<33.0
	09/23/08	43.4	72.9	<0.500	1.63	4.16	1.39	3,100	0.0186	0.198	<1.00	8.22
	03/24/09	44.1	153	<0.500	<20.0	13.6	6.07	3,320	0.0879	<0.500	<1.00	34.3
	09/22/09	39.1	70.4	<0.500	<2.00	<10.0	<1.00	3,540	<0.00500	<0.500	<1.00	<25.0
	03/18/10	32.7	64.0	<1.00	<2.00	<2.00	<1.00	3,420	0.0232	<1.00	<1.00	<10.0
	09/22/10	47.9	104	<1.00	<2.00	3.00	<10.0	3,720	0.299	<1.00	<1.00	<10.0
dup	09/22/10	49.2	102	<1.00	<2.00	2.10	<10.0	3,610	0.550	<1.00	<1.00	<10.0
	03/23/11	38.9	80.8	<1.00	<2.00	2.66	1.06	3,360	0.157	<1.00	<1.00	<10.0
	09/30/11	45.8	78.7	<5.00	<10.0	<10.0	<5.00	3,700	0.0121	<5.00	<5.00	<50.0
	04/05/12	40	78.0	<0.19	0.97 J	2.3	0.86 J B	3,200	0.046	0.12 J B	0.020 J	8.6 J
<b>B-28</b>	02/18/00	12.2	422	3.68	43.7	104	49.6	-	0.088	1.56	0.250	165
	05/23/00	9.56	245	1.44	25.8	46.8	20.5	-	ND	2.77	ND	91.3
	08/25/00	5.30	120	ND	8.25	15.2	5.65	-	ND	1.34	ND	50.4
	11/30/00	17.9	459	ND	42.1	64	30.3	-	ND	2.71	ND	149
	02/23/01	7.56	131	ND	8.96	14.2	5.55	-	ND	1.81	ND	36.3
	05/17/01	5.61	91.4	ND	4.98	7.37	2.72	-	ND	1.99	ND	20.0
	09/20/01	43.4	82.1	ND	1.66	5.46	ND	-	ND	1.09	ND	7.82
	03/21/02	4.07	69.2	ND	3.11	11.5	2.92	-	ND	ND	ND	14.8
	09/24/02	2.98	51.9	ND	ND	ND	ND	-	ND	2.44	ND	ND
	03/20/03	2.20	48.9	ND	ND	ND	ND	-	ND	1.64	ND	ND
	09/30/03	21.9	483	1.73	57.2	109	40.4	-	ND	ND	ND	205
	03/29/04	6.00	111	1.18	9.42	28.7	8.52	-	<0.200	<1.00	<1.00	34.1
	09/21/05	5.08	83.8	<1.00	3.64	9.80	2.68	-	<0.200	<2.00	<1.00	17.9
	03/14/06	6.40	192	2.87	31.6	139	172	-	<0.200	<2.00	<1.00	451
	09/28/06	3.96	88.0	<1.00	4.17	45.1	3.7	-	<0.200	<2.00	<1.00	20.1
	09/18/07	2.77	53.0	0.228	<0.800	2.88	0.989	1,270	<0.200	<1.60	<0.0970	7.12
	03/25/08	4.46	108	1.52	4.90	68.1	6.75	1,200	<0.200	<5.00	<0.120	<33.0
	09/23/08	4.74	152	2.05	8.20	80.6	13.6	1,370	0.0841	1.73	<10.0	51.5
	03/24/09	3.60	90.2	1.20	5.70	42.0	8.43	1,220	0.0613	<0.500	<1.00	23.0
	09/22/09	7.54	249	2.43	19.9	144	21.4	1,470	0.0719	<0.500	<1.00	101
	03/19/10	3.75	71.0	<1.00	3.75	18.9	3.59	1,240	0.0247	<1.00	<1.00	17.6
	09/21/10	4.32	123	<1.00	8.54	35.7	8.40	1,250	0.0135	<1.00	<1.00	48.6
	03/23/11	4.48	80.3	<1.00	3.97	10.8	2.97	1,480	<0.00500	<1.00	<1.00	16.1
	10/03/11	3.21	56.8	<1.00	<2.00	5.33	2.78	1,130	0.00526	<1.00	<1.00	14.2
	04/05/12	3.4	0.052	0.20 J	<0.84	3.8	0.78 J B	1,100	0.0047 J	0.13 J B	<0.018	5.7 J
	10/08/12	2.8	48.0	<1.0	<2.0	<2.0	<1.0	1,200	0.0014	<1.0	<1.0	<10
	04/01/13	3.5	68	<1.0	2.9	16	1.4	1,300	0.0012	<1.0	<1.0	12
	09/18/13	3.1	56	<1.0	4.4	8.3	<1.0	1,200	0.0011	<1.0	<1.0	11
	03/18/14	3.3	62	<1.0	4.4	10	1.1	1,300	0.0042	<1.0	<1.0	11
	09/10/14	3	64	<1.0	2.1	15	13	1,200	0.0096	<1.0	<1.0	12
	03/09/15	<5.0	61	<2.0	<2.0	18	<2.0	1,200	0.011	<5.0	<2.0	<35
	<b>09/14/15</b>	<b>3.5 J</b>	<b>65 B</b>	<b>1.5 J</b>	<b>20</b>	<b>41</b>	<b>1.8 J B</b>	<b>1,200</b>	<b>0.037</b>	<b>&lt;10.0</b>	<b>&lt;4.0</b>	<b>&lt;70</b>
<b>B-29</b>	09/20/01	11.0	292	ND	28.6	53.1	26.4	-	ND	3.85	ND	122
	03/21/02	1.26	60.0	ND	ND	3.72	ND	-	ND	ND	ND	7.1
	09/24/02	ND	60.1	ND	ND	ND	ND	-	ND	1.03	1.02	ND

**TABLE 4**  
**GROUNDWATER ANALYTICAL RESULTS - TOTAL METALS**  
 Willbridge Terminals  
 Portland, Oregon

	03/20/03	ND	59.3	ND	ND	2.63	ND	-	ND	1.43	ND	ND
	09/30/03	3.32	322	13.3	29.5	167	28	-	ND	ND	ND	125
	03/29/04	5.28	367	20.6	29.3	162	45.7	-	<0.200	<1.00	<1.00	146
	09/21/05	3.08	193	2.90	15.9	58.7	12.7	-	<0.200	<2.00	<1.00	72
	03/14/06	1.26	98.6	<1.00	2.34	8.34	3.52	-	<0.200	<2.00	<1.00	13.6
	09/28/06	<1.00	64.1	<1.00	<1.00	12.2	<1.00	-	<0.200	<2.00	<1.00	13.2
	03/22/07	1.55	156	3.46	11.00	88.2	12.2	3,470	<0.00500	<1.60	<0.800 <sup>6</sup>	36.7 <sup>7</sup>
	09/18/07	1.62	120	3.09	7.09	95.4	6.29	3,890	<0.200	<1.60	<0.0970	42.9
	03/25/08	0.920	62.9	<0.380	<1.00	<2.70	<0.540	2,790	<0.200	<5.00	<0.120	<33.0
	09/23/08	<10.0	117	1.46	5.34	36.1	17.9	4,950	0.00930	2.46	<10.0	84.2
	03/24/09	3.72	302	10.6	24.1	246	27.1	5,000	0.0664	<0.500	<1.00	170
	09/22/09	<1.00	87.8	1.11	2.46	42.4	2.83	4,530	0.0158	<0.500	<1.00	<25.0
	03/19/10	<1.00	55.9	<1.00	<2.00	8.68	<1.00	4,010	0.0154	<1.00	<1.00	<10.0
<b>B-29</b>	09/21/10	1.68	146	2.22	8.44	64.5	<10.0	4,600	0.0199	<1.00	<1.00	40.5
	03/23/11	<1.00	90.4	<1.00	3.21	32.0	2.63	4,950	0.0124	<1.00	<1.00	20.6
	10/03/11	1.01	56.3	<1.00	<2.00	<2.00	<1.00	3,520	<0.00500	<1.00	<1.00	<10.0
	04/05/12	0.96 J	61	<0.19	<0.84	0.68 J	0.26 J B	3,800	<0.00065	0.51 J B	0.020 J	4.4 J
	10/08/12	<1.0	65.0	<1.0	<2.0	6.7	<1.0	4,400	0.0021	<1.0	<1.0	15
	04/01/13	<1.0	70	<1.0	<2.0	21	<1.0	4,300	0.0022	<1.0	<1.0	18
	09/18/13	1.1	77	1.0	14.0	37	2.2	4,200	0.0031	<1.0	<1.0	22
	03/18/14	1.4	110	1.1	6.1	53	3.1	4,000	0.0220	<1.0	<1.0	25
	09/09/14	<1.0	71	<1.0	<2.0	11	<1.0	4,500	0.0049	<1.0	<1.0	16
	03/09/15	<5.0	69	<2.0	<2.0	<10	<2.0	5,500	0.0042	<5.0	<2.0	<35
	<b>09/14/15</b>	<b>&lt;10.0</b>	<b>84 B</b>	<b>1.6 J</b>	<b>2.7 J</b>	<b>38</b>	<b>1.2 J B</b>	<b>4,400</b>	<b>0.1900</b>	<b>&lt;10.0</b>	<b>&lt;4.0</b>	<b>&lt;70</b>
<b>B-30</b>	02/18/00	18.5	327	35.5	26.90	67.1	48.2	-	ND	2.65	0.210	238
	05/23/00	14.1	117	9.78	9.04	71.3	10.8	-	ND	2.67	ND	52.7
	08/25/00	22.1	49.7	14.6	1.53	17.6	4.49	-	ND	ND	ND	63.2
	11/30/00	17.5	51.3	ND	ND	ND	ND	-	ND	1.03	ND	11.6
	02/23/01	14.4	70.4	ND	ND	ND	ND	-	ND	ND	ND	ND
dup**	02/23/01	14.0	67.0	ND	ND	ND	ND	-	ND	ND	ND	ND
	05/17/01	17.7	47.7	ND	ND	ND	ND	-	ND	1.75	ND	ND
	09/20/01	2.11	82.5	1.67	3.47	20.8	16.1	-	ND	1.90	ND	30.8
dup	09/20/01	13.8	56.4	ND	ND	2.18	ND	-	ND	1.10	ND	ND
	03/21/02	17.7	43.8	8.23	1.11	5.33	2.27	-	ND	ND	1.00	19.1
dup	03/21/01	21.0	48.9	3.02	1.42	6.98	4.58	-	ND	ND	ND	22.0
	09/24/02	12.6	49.5	ND	ND	ND	ND	-	ND	1.97	1.26	ND
	03/20/03	15.8	48.3	ND	ND	ND	ND	-	ND	ND	ND	ND
dup*	03/20/03	14.4	48.6	ND	ND	ND	ND	-	ND	ND	ND	ND
	09/30/30	23.8	193	22.1	19.5	63.1	39.2	-	ND	ND	ND	159
dup***	09/30/30	26.7	276	30.1	26.8	84.2	57.4	-	ND	ND	ND	211
	03/29/04	18.3	52.9	2.29	1.06	4.05	3.30	-	<0.200	<1.00	<1.00	7.52
	09/21/05	17.9	56.7	1.80	<1.00	5.01	3.32	-	<0.200	<2.00	<1.00	11.3
dup****	09/21/05	17.7	54.4	<1.00	1.17	3.84	2.94	-	<0.200	<2.00	<1.00	10.6

**TABLE 4**  
**GROUNDWATER ANALYTICAL RESULTS - TOTAL METALS**  
 Willbridge Terminals  
 Portland, Oregon

	03/14/06	20.6	66.8	<1.00	<1.00	2.69	2.02	-	<0.200	<2.00	<1.00	5.57
dup	03/14/06	20.4	69.2	1.02	1.03	3.23	2.55	-	<0.200	<2.00	<1.00	7.50
	09/28/06	16.4	58.0	<1.00	<1.00	<2.00	2.02	-	<0.200	<2.00	<1.00	9.10
	03/22/07	13.6	72.5	0.800	2.83	7.19	3.08	2,100	0.0235	<2.00	<0.800 <sup>6</sup>	14.6
	09/18/07	21.1	51.1	0.394	0.94	5.31	1.55	3,170	<0.200	<2.00	<0.0970	8.93
dup	09/18/07	19.2	51.7	0.280	0.97	5.33	1.84	3,390	<0.200	<2.00	<0.0970	8.92
	09/21/10	25.0	130	13.1	8.86	77.2	29.8	3,180	0.0550	<1.00	<1.00	789
	03/23/11	20.7	55.9	3.25	2.55	26.4	7.93	2,500	<0.00500	<1.00	<1.00	175
dup	03/23/11	21.3	55.4	2.65	<2.00	22.4	6.11	3,000	<0.00500	<1.00	<1.00	124
	10/03/11	16.0	44.4	<1.00	<2.00	2.50	<1.00	3,760	<0.00500	<1.00	<1.00	17.6
dup	10/03/11	15.2	42.6	<1.00	<2.00	<2.00	<1.00	3,740	<0.00500	<1.00	<1.00	<10.0
	04/04/12	18	62	6.3	6.0	63	16 B	1,800	0.0081	0.69 J B	0.070 J	130
dup	04/04/12	17	55	5.2	5.0	48	14 B	1,900	0.015	0.17 J B	0.036 J	100
	10/08/12	14	64	4.9	3	29	6.5	3,800	0.018	<1.0	<1.0	56
dup	10/08/12	15	60.0	4.0	3.5	25	5.6	3,500	0.017	<1.0	<1.0	45
	04/01/13	6.7	62	2.0	<2.0	18	3.2	3,700	0.0022	<1.0	<1.0	20
	09/18/13	7.0	54	2.2	3.0	5	2.5	4,300	0.0047	<1.0	<1.0	29
	03/18/14	1.6	29	1.9	<2.0	15	1.5	140	0.0082	<1.0	<1.0	20
	09/09/14	5.6	52	1.5	<2.0	14	1.7	4,200	0.0060	<1.0	<1.0	17
	03/09/15	6.8	51	<2.0	<2.0	13	<2.0	2,500	0.0051	<5.0	<2.0	53
	<b>09/14/15</b>	<b>4.5 J</b>	<b>63 B</b>	<b>0.86 J</b>	<b>1.8 J</b>	<b>8.2 J</b>	<b>1.5 J B</b>	<b>5,000</b>	<b>0.0700</b>	<b>&lt;10.0</b>	<b>&lt;4.0</b>	<b>40 J</b>
CR-1	09/21/01	14.3	60.6	ND	2.03	4.68	2.83	-	ND	1.18	ND	8.46
	03/21/02	1.73	18.8	ND	1.13	3.97	ND	-	ND	ND	ND	16.3
	09/24/02	2.04	27.4	ND	ND	ND	ND	-	ND	ND	ND	6.09
	03/20/03	11.9	30.0	ND	1.56	11.2	2.11	-	ND	ND	ND	17.9
	09/30/03	8.32	47.9	ND	2.49	8.36	3.91	-	ND	1.89	ND	13.9
	03/30/04	2.10	261	5.83	22.0	53.5	67.6	-	<0.200	<1.00	<1.00	212
	03/08/05	1.67	24.5	<1.00	<1.00	2.62	<1.00	-	<0.200	<2.00	<1.00	10.2
	09/21/05	3.25	21.5	<1.00	<1.00	2.31	<1.00	-	<0.200	<2.00	<1.00	<5.00
	09/27/06	1.94	20.7	0.144	<0.800	2.77	0.440	-	<5.00	<2.00	<0.0960	10.9
	03/22/07	0.912	12.2	<0.0752	<0.800	3.92	<0.432 <sup>6</sup>	185	<0.00500	<1.60	<0.800 <sup>6</sup>	9.58
	09/20/07	1.41	20.1	<0.800	<0.800	<1.60	<0.800	862	<0.200	<1.60	<0.800	<4.00
	03/25/08	0.510	12.8	<0.380	<1.00	3.40	<0.540	76.1	<0.200	<5.00	<0.120	<33.0
	09/24/08	3.47	19.8	<0.500	1.17	3.97	1.19	595	0.00198	<0.500	<1.00	13.3
	03/25/09	<1.00	12.1	<0.500	<2.00	<2.00	<1.00	127	<0.00500	<0.500	<1.00	7.68
	09/22/09	1.24	13.2	<0.500	<2.00	68.2	<1.00	560	<0.00500	<0.500	<1.00	74.8
	03/19/10	<1.00	10.3	<1.00	<2.00	<2.00	<1.00	113	<0.00500	<1.00	<1.00	<10.0
dup	03/19/10	<1.00	9.95	<1.00	<2.00	<2.00	<1.00	146	<0.00500	<1.00	<1.00	<10.0
	09/22/10	<1.00	13.6	<1.00	<2.00	2.53	<1.00	214	<0.00500	<1.00	<1.00	<10.0
	03/24/11	<1.00	10.1	<1.00	<2.00	3.19	<1.00	197	<0.00500	<1.00	<1.00	<10.0
	10/05/11	1.20	13.3	<1.00	<2.00	2.48	<1.00	375	<0.00500	<1.00	<1.00	<10.0
	04/05/12	0.43 J	8.1	<0.19	<0.84	2.8	0.20 J B	91	0.0038 J	<0.092	<0.018	7.4 J
	10/01/12	<1.0	14	<1.0	<2.0	4.8	<1.0	200	0.0038	<1.0	<1.0	11
	03/29/13	<1.0	9.9	<1.0	8.9	4.7	<1.0	180	0.00095	<1.0	<1.0	<10
dup	03/29/13	<1.0	10	<1.0	15.0	5.9	<1.0	180	0.0011	<1.0	<1.0	<10

**TABLE 4**  
**GROUNDWATER ANALYTICAL RESULTS - TOTAL METALS**  
 Willbridge Terminals  
 Portland, Oregon

	09/16/13	<1.0	13	<1.0	<2.0	4.3	<1.0	170	0.0039	<1.0	<1.0	16
	03/17/14	<1.0	13	<1.0	<2.0	2.5	<1.0	91	0.0060	<1.0	<1.0	10
	09/09/14	<1.0	13	<1.0	<2.0	4.5	<1.0	150	0.0057	<1.0	<1.0	11
	03/09/15	<5.0	13	<2.0	<2.0	<10	<2.0	170	0.0053	<5.0	<2.0	<35
dup	03/09/15	<5.0	11	<2.0	<2.0	<10	<2.0	160	0.0048	<5.0	<2.0	<35
	09/14/15	<5.0	14	<2.0	<2.0	<10	<2.0	180	0.0055	<5.0	<2.0	<35
<b>KINDER MORGAN</b>												
MW-8	02/16/00	9.74	56.6	0.73	3.96	4.76	5.69	-	ND	ND	ND	34.4
	05/31/00	3.48	22.6	ND	ND	ND	ND	-	ND	ND	ND	7.88
	08/24/00	13.6	38.1	ND	ND	ND	ND	-	ND	ND	ND	7.99
	12/01/00	17.7	71.0	2.36	1.95	2.72	2.50	-	ND	2.39	ND	20.7
	02/22/01	11.1	24.9	ND	1.30	2.34	ND	-	ND	ND	ND	7.20
	05/16/01	9.42	30.8	ND	ND	1.19	ND	-	ND	ND	ND	ND
dup	05/16/01	9.31	31.6	ND	ND	1.35	ND	-	ND	ND	ND	20.8
	09/21/01	16.8	63.7	1.41	2.19	3.5	ND	-	ND	ND	ND	13.8
	03/14/02	1.98	21.3	ND	ND	3.76	ND	-	ND	ND	ND	8.24
dup	03/14/02	2.81	22.0	ND	ND	3.37	ND	-	ND	ND	ND	11.5
	09/27/02	11.6	59.2	1.30	2.58	5.14	2.94	-	ND	ND	ND	23.0
	03/18/03	4.12	40.8	ND	ND	NS	ND	-	ND	ND	ND	NS
dup	03/18/03	3.52	40.8	ND	ND	NS	ND	-	ND	ND	ND	NS
	09/24/03	10.8	28.1	ND	ND	ND	ND	-	ND	ND	ND	6.70
	03/30/04	1.50	23.8	<1.00	<1.00	<2.00	<1.00	-	<0.200	<1.00	<1.00	10.7
	09/27/04	16.0	85.8	2.68	5.98	8.98	5.62	-	<0.200	<1.00	<1.00	61.3
dup	09/27/04	16.7	110	3.95	4.54	13.0	7.05	-	<0.200	<1.00	<1.00	88.8
	03/29/05	3.73	14.7	1.46	0.360	1.64	1.15	-	<0.200	<1.00	<1.00	22.9
	09/21/05	8.67	25.8	1.28	<1.00	4.25	1.81	-	<0.200	<2.00	<1.00	21.7
	03/15/06	2.16	24.4	<1.00	<1.00	2.34	<1.00	-	<0.200	<2.00	<1.00	23.4
dup	03/15/06	1.64	24.5	<1.00	<1.00	2.04	<1.00	-	<0.200	<2.00	<1.00	22.2
	09/26/06	8.84	27.6	4.08	<1.00	2.98	1.49	-	<0.200	<2.00	<1.00	43.0
	03/22/07	2.08	20.5	<1.00	<1.00	<1.00	<1.00	-	<0.200	<1.00	<1.00	13.8
	09/20/07	7.20	22.2	<1.00	2.09	5.22	2.68	-	<0.200	<2.00	<1.00	20.9
dup	09/20/07	6.90	13.7	<1.00	<1.00	<2.00	<1.00	-	<0.200	<2.00	<1.00	12.2
	03/25/08	0.80	13.7	0.272	0.220	1.59	0.248	30.5	-	<0.2	0.009 <sup>9</sup>	10.4
	09/22/08	3.96	19.4	0.556	0.56	1.98	1.23	425	-	0.4	0.027	19.7
dup	09/22/08	3.79	20.7	0.584	0.35	1.96	0.936	467	-	0.4	0.016	19.8
	03/16/09	2.25	22.8	<0.500	<2.00	<2.00	<1.00	-	<0.200	<0.500	<1.00	13.6
dup	03/16/09	2.25	22.0	<0.500	<2.00	<2.00	<1.00	-	<0.200	<0.500	<1.00	10.5
	09/15/09	5.69	25.4	0.890	<2.00	2.72	2.06	-	<0.200	<0.500	<1.00	22.3
	03/17/10	5.29	29.9	1.38	<2.00	2.94	1.87	218	-	<1.00	<1.00	39.9
	09/20/10	3.50	15.5	<1.00	<2.00	<2.00	<1.00	901	<0.200	<1.00	<1.00	<10.0
	03/21/11	0.63 <sup>10</sup>	19	0.26 <sup>10</sup>	<2.0	0.86	<1.0	300	<1.0	<1.0	<1.0	27
	09/27/11	<5.0	16	<5.0	8.2	120	<5.0	1,400	<1.0	<5.0	<5.0	<100
	03/26/12	<5.0	20	<5.0	5.6	<10	<5.0	150	<1.0	<5.0	<5.0	<100
	09/24/12	<5.0	9.1	<2.0	<10	<20	<5.0	360	<1.0	<5.0	<5.0	<100
	03/25/13	<5.0	15	<2.0	<10	<20	<5.0	380	<1.0	<5.0	<5.0	100

**TABLE 4**  
**GROUNDWATER ANALYTICAL RESULTS - TOTAL METALS**  
 Willbridge Terminals  
 Portland, Oregon

	09/10/13	<5.0	20	<2.0	91.0	<20	<5.0	2,100	<1.0	<5.0	<5.0	<100
	03/03/14	<5.0	16	<2.0	<10	<20	<5.0	450	<1.0	<5.0	<5.0	<100
dup	03/03/14	<5.0	13	<2.0	<10	<20	<5.0	350	<1.0	<5.0	<5.0	<100
	08/26/14	<5.0	31	<2.0	<10	<20	<5.0	2,800	<1.0	<5.0	<5.0	<100
	03/03/15	<5.0	19	<2.0	<10	<20	<5.0	630	<1.0	<5.0	<5.0	<100
	<b>08/19/15</b>	<b>3.08</b>	<b>34.1</b>	<b>0.652 J</b>	<b>0.740 J</b>	<b>1.85 J</b>	<b>&lt;0.240</b>	<b>3,470</b>	<b>&lt;0.0490</b>	<b>&lt;0.380</b>	<b>&lt;0.310</b>	<b>12.8 J</b>
<b>MW-25</b>	09/21/01	56.3	95.8	ND	3.39	3.65	4.11	-	ND	ND	ND	25.8
	03/14/02	40.6	115	ND	5.73	8.32	9.69	-	ND	ND	1.15	27.8
	09/27/02	116	186	ND	6.06	8.97	9.90	-	ND	ND	ND	33.4
	03/18/03	38.6	44.0	ND	ND	NS	ND	-	ND	1.15	1.10	NS
	09/24/03	66.1	181	1.25	14.4	23	20.1	-	ND	1.79	ND	71.2
	03/30/04	52.1	58.0	<1.00	1.57	<2.00	<1.15	-	<0.200	<1.00	<1.00	8.10
	09/27/04	71.2	140	<1.00	5.06	11.2	11.2	-	<0.200	<1.00	<1.00	30.4
	03/28/05	61.6	94.1	<1.00	1.16	2.53	4.74	-	<0.200	0.400	<1.00	11.8
	09/21/05	62.2	64.7	<1.00	1.40	2.99	1.89	-	<0.200	<2.00	<1.00	8.38
	03/15/06	60.7	70.1	<1.00	<1.00	4.69	1.83	-	<0.200	<2.00	<1.00	9.20
	09/26/06	52.9	76.3	<1.00	1.79	2.58	3.40	-	<0.200	<2.00	<1.00	11.7
	03/22/07	46.8	77.1	<1.00	2.88	3.93	4.52	-	<0.200	<1.00	<1.00	16.2
	09/20/07	121	201	<1.00	8.85	12.6	15.7	-	<0.200	<2.00	<1.00	43.6
	03/24/08	40.2	119	0.372	5.28	12.0	12.2	4,790	-	<0.2	0.035	27.1
	09/22/08	39.0	239	0.666	9.18	20.6	24.3	5,160	-	0.4	0.072	44.0
	03/16/09	58.8	162	<0.500	9.16	15.4	15.0	-	<0.200	<0.500	<1.00	37.2
	09/15/09	51.9	119	<0.500	6.72	9.30	8.94	-	<0.200	<0.500	<1.00	24.5
	03/16/10	60.4	89.8	<1.00	<10.0	<10.0	6.87	4,970	-	<1.00	<1.00	<50.0
	09/20/10	70.9	187	<5.00	10.6	20.6	15.4	4,980	<0.200	<5.00	<5.00	<50.0
	03/21/11	40	86	<0.50	0.89 <sup>10</sup>	5.0	5.1	3,900	<1.0	<1.0	<1.0	13
	09/27/11	63	59	<5.0	<5.0	<10	<5.0	5,800	<1.0	<5.0	<5.0	<100
	03/26/12	27	39	<5.0	<5.0	<10	<5.0	3200	<1.0	<5.0	<5.0	<100
	09/24/12	67	40.0	<2.0	14	<20	<5.0	4,400	<1.0	<5.0	<5.0	<100
	03/26/13	<5.0	25	<2.0	<10	<20	<5.0	600	<1.0	<5.0	<5.0	120
	09/10/13	39.0	42	<2.0	<10	<20	<5.0	4,600	<1.0	<5.0	<5.0	<100
	03/03/14	29.0	39	<2.0	<10	<20	<5.0	3,800	<1.0	<5.0	<5.0	<100
	08/26/14	84	45	<2.0	<10	<20	<5.0	6,200	<1.0	<5.0	<5.0	<100
	03/03/15	14	25	<2.0	40	<20	<5.0	1,800	10	<5.0	<5.0	<100
	<b>08/19/15</b>	<b>61.8</b>	<b>54.2</b>	<b>&lt;0.160</b>	<b>&lt;0.540</b>	<b>&lt;0.520</b>	<b>&lt;0.240</b>	<b>5,420</b>	<b>&lt;0.0490</b>	<b>&lt;0.380</b>	<b>&lt;0.310</b>	<b>&lt;2.56</b>
<b>MW-26</b>	02/17/00	47.4	94.3	0.050	4.68	3.68	3.42	-	ND	0.6	ND	14.1
dup	02/17/00	48.7	90.4	0.500	4.34	4.96	3.12	-	ND	0.33	ND	42.2
	05/30/00	44.3	102	ND	4.53	5.01	4.92	-	ND	ND	ND	16.2
	08/23/00	53.0	59.4	ND	2.18	2.49	2.28	-	ND	ND	ND	ND
dup	08/23/00	57.6	64.2	ND	2.27	3.84	2.28	-	ND	ND	ND	7.91
	12/01/00	52.6	62.0	ND	1.58	ND	2.54	-	ND	1.16	ND	7.96
	02/21/01	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	-	NS/S	NS/S	NS/S	NS/S
	05/17/01	59.0	67.8	ND	2.21	1.70	2.25	-	ND	ND	ND	12.0
	09/27/02	45.0	52.4	ND	1.23	ND	2.20	-	ND	ND	ND	16.9
	03/18/03	20.5	67.0	ND	ND	NS	ND	-	ND	ND	1.09	

**TABLE 4**  
**GROUNDWATER ANALYTICAL RESULTS - TOTAL METALS**  
 Willbridge Terminals  
 Portland, Oregon

	09/24/03	51.0	51.2	ND	ND	ND	2.14	-	ND	ND	ND	5.07
	03/30/04	43.1	66.1	<1.00	<1.00	<1.00	1.02	-	<0.200	<1.00	<1.00	<5.00
	09/27/04	65.7	66.2	<1.00	2.06	4.48	6.54	-	<0.200	<1.00	<1.00	18.8
	03/28/05	55.4	74.9	1.04	1.29	3.13	5.86	-	<0.200	0.53	<1.00	15.8
	09/21/05	62.3	46.2	<1.00	<1.00	<2.00	1.22	-	<0.200	<2.00	<1.00	<5.00
	03/15/06	47.6	77.1	<1.00	<1.00	<2.00	<1.00	-	<0.200	<2.00	<1.00	<5.00
	09/26/06	45.7	68.4	<1.00	<1.00	<2.00	<1.00	-	<0.200	<2.00	<1.00	5.05
dup	09/26/06	48.0	69.2	<1.00	<1.00	2.12	<1.00	-	<0.200	<2.00	<1.00	<5.00
	03/22/07	43.8	71.0	<1.00	<1.00	<1.00	<1.00	-	<0.200	<1.00	<1.00	13.5
	09/20/07	50.1	68.5	<1.00	<1.00	<2.00	1.18	-	<0.200	<2.00	<1.00	7.64
	03/24/08	39.5	74.0	0.048	1.06	1.18	2.22	5,640	-	<0.2	0.006 <sup>9</sup>	5.85
dup	03/24/08	37.9	87.5	0.099	1.66	1.96	3.35	5,580	-	<0.2	0.011 <sup>9</sup>	9.57
	09/22/08	39.5	102	0.112	2.97	3.39	4.98	4,660	-	0.4	0.017	13.8
	03/16/09	47.0	105	<0.500	3.99	4.56	5.49	-	<0.200	<0.500	<1.00	17.7
	09/15/09	43.8	81.4	<0.500	3.33	2.87	4.24	-	<0.200	<0.500	<1.00	16.4
dup	09/15/09	42.1	87.0	<0.500	2.87	2.59	3.79	-	<0.200	<0.500	<1.00	11.3
	03/16/10	35.8	67.6	<1.00	<2.00	<2.00	2.68	5,860	-	<1.00	<1.00	<10.0
	09/20/10	44.4	151	<5.00	<10.0	<10.0	11.1	4,410	<0.200	<5.00	<5.00	<50.0
	03/21/11	35	74	<0.50	<2.0	<2.0	<1.0	5,600	<1.0	<1.0	<1.0	3.3
	09/27/11	53	48	<5.0	<5.0	<10	<5.0	5,100	<1.0	<5.0	<5.0	<100
	03/26/12	17	75	<5.0	9.9	<10	<5.0	6,200	<1.0	<5.0	<5.0	<100
	09/24/12	52	51.0	<2.0	16	<20	<5.0	4,200	<1.0	<5.0	<5.0	<100
	03/26/13	9.9	64	<2.0	<10	<20	<5.0	5,900	<1.0	<5.0	<5.0	<100
	09/10/13	55.0	46	<2.0	<10	<20	<5.0	4,400	<1.0	<5.0	<5.0	<100
	03/03/14	11.0	69	<2.0	<10	<20	<5.0	5,500	<1.0	<5.0	<5.0	<100
	08/26/14	48	57	<2.0	<10	<20	<5.0	5,000	<1.0	<5.0	<5.0	<100
	03/03/15	28	50	<2.0	69	<20	<5.0	5,100	<1.0	<5.0	<5.0	<100
	<b>08/19/15</b>	<b>56.0</b>	<b>56.4</b>	<b>&lt;0.160</b>	<b>&lt;0.540</b>	<b>1.08 J</b>	<b>0.548 J</b>	<b>4,720</b>	<b>&lt;0.0490</b>	<b>&lt;0.380</b>	<b>&lt;0.310</b>	<b>&lt;2.56</b>
MW-33	02/16/00	8.42	76.8	0.060	1.62	4.23	3.68	-	ND	ND	ND	7.46
	05/30/00	6.55	111	ND	1.79	3.38	1.54	-	ND	ND	ND	7.21
	08/24/00	10.3	227	ND	1.04	2.46	ND	-	ND	2.59	ND	ND
	11/30/00	58.0	563	ND	2.23	3.43	ND	-	ND	1.63	ND	8.82
	02/22/01	14.2	91.0	ND	1.79	3.39	1.03	-	ND	ND	ND	9.44
dup	02/22/01	14.2	104	ND	1.88	3.90	1.55	-	ND	ND	ND	11
	05/16/01	17.8	184	ND	ND	1.28	ND	-	ND	ND	ND	ND
	09/21/01	10.0	75.7	ND	ND	ND	ND	-	ND	1.51	ND	ND
	03/14/02	9.75	72.2	ND	ND	ND	ND	-	ND	ND	2.02	ND
	09/27/02	30.2	356	ND	2.06	3.03	1.36	-	ND	ND	ND	20.5
	03/18/03	8.67	40.1	ND	ND	NS	ND	-	ND	ND	1.40	NS
	09/24/03	23.2	191	ND	ND	ND	ND	-	ND	ND	ND	ND
	03/29/04	12.4	55.2	<1.00	1.14	<2.00	<1.00	-	<0.200	<1.00	<1.00	<5.00
	09/27/04	132	1410	<2.00	6.28	13.5	<2.00	-	0.490	<2.00	<2.00	31.9
	03/29/05	7.57	325	<1.00	0.360	2.44	0.210	-	<0.200	<1.00	<1.00	7.37
	09/21/05	18.1	398	<1.00	1.65	2.90	<1.00	-	<0.200	<2.00	<1.00	5.80
dup	09/21/05	16.3	366	<1.00	1.51	2.92	<1.00	-	<0.200	<2.00	<1.00	5.16

**TABLE 4**  
**GROUNDWATER ANALYTICAL RESULTS - TOTAL METALS**  
 Willbridge Terminals  
 Portland, Oregon

	03/15/06	11.2	58.8	<1.00	<1.00	<2.00	<1.00	-	<0.200	<2.00	<1.00	6.00
	09/27/06	26.3	409	<0.0752	<0.800	<1.60	<0.432	-	7.24	<1.60	<0.0960	24.4
	03/22/07	13.9	123	0.205	<0.800	<1.60	<0.432	-	0.00767	<1.60	<0.0960	8.27
dup	03/22/07	37.3	380	0.952	1.10	2.42	<0.432	-	<0.00500	<1.60	<0.0960	18.4
	09/18/07	32.9	488	<1.00	1.33	2.73	<1.00	-	0.0166	<2.00	<1.00	24.5
	03/25/08	12.1	71.4	0.047	0.580	1.41	0.478	1,100	0.0235	<0.2	0.009 <sup>9</sup>	3.14
	09/23/08	32.0	466	0.135	1.31	3.28	0.764	1,780	0.167	0.4	0.029	8.11
	03/16/09	12.7	96.5	<0.500	<2.00	<2.00	<1.00	-	0.0126	<0.500	<1.00	<5.00
	09/14/09	14.1	208	<0.500	<2.00	2.92	1.43	-	0.0137	<0.500	<1.00	7.84
	03/16/10	12.1	80.9	<1.00	<4.00	<4.00	1.32	1,210	0.00496	<1.00	<1.00	<20.0
	09/20/10	20.3	259	<2.00	<2.00	2.51	1.11	1,470	0.0301	<2.00	<1.00	<10.0
	03/21/11	6.5	110	<0.50	<10	<10	<1.0	730	0.00727	<5.0	<1.0	<50
	09/27/11	<5.0	110	<5.0	<5.0	<10	<5.0	1,400	<1.0	<5.0	<5.0	<100
	03/26/12	<5.0	29	<5.0	<5.0	<10	<5.0	610	0.00056	<5.0	<5.0	<100
	09/24/12	5.4	54.0	<2.0	<10	<20	<5.0	1,400	0.0021	<5.0	<5.0	<100
	03/25/13	24.0	590	<2.0	<10	<20	<5.0	2,700	0.0013	<5.0	<5.0	<100
	09/09/13	6.2	53	<2.0	<10	<20	<5.0	1,900	0.0657	<5.0	<5.0	<100
	03/03/14	<5.0	39	<2.0	<10	<20	<5.0	900	0.0021	<5.0	<5.0	<100
	08/26/14	5.2	54	<2.0	<10	<20	<5.0	1,900	0.00075	<5.0	<5.0	<100
	03/03/15	<5.0	28	<2.0	<10	<20	<5.0	990	0.00614	<1.0	<5.0	<5.0
	<b>08/19/15</b>	<b>72.3</b>	<b>1,310</b>	<b>0.182 J</b>	<b>4.83</b>	<b>18.1</b>	<b>2.14</b>	<b>2,560</b>	<b>0.0527 J</b>	<b>0.555 J</b>	<b>&lt;0.310</b>	<b>38</b>
MW-34	09/21/01	69.7	381	2.39	14.3	144	14.6	-	ND	1.46	ND	104
	03/14/02	37.6	178	ND	5.82	13.2	5.49	-	ND	ND	1.51	32.1
	09/27/02	162	670	1.64	26.4	67.6	22.6	-	ND	1.3	ND	126
	03/18/03	14.8	93.4	ND	6.02	NS	5.41	-	ND	ND	1.13	NS
	09/24/03	10.9	65.4	ND	1.06	2.36	1.17	-	ND	ND	ND	9.94
	03/29/04	3.64	35.0	<1.00	1.14	<2.00	<1.00	-	<0.200	<1.00	<1.00	<5.00
	09/27/04	87.9	355	<1.00	11.4	28.5	11.1	-	<0.200	1.31	<1.00	54.7
dup	03/29/05	12.6	-	<1.00	0.530	4.75	1.58	-	<0.200	0.350	<1.00	12.7
	03/29/05	12.5	75.6	<1.00	0.460	3.82	1.48	-	<0.200	0.430	<1.00	11.9
	09/21/05	53.7	133	<1.00	1.05	3.54	1.13	-	<0.200	<2.00	<1.00	7.54
	03/15/06	5.90	57.2	<1.00	3.08	3.29	2.46	-	<0.200	<2.00	<1.00	13.2
	09/27/06	14.3	70.0	0.103	0.899	3.18	1.39	-	<0.00500	<1.60	<0.0960	15.0
	03/22/07	25.2	117	0.176	4.01	9.22	5.01	-	0.00877	<1.60	<0.0960	32.9
	09/18/07	32.5	114	<1.00	3.14	8.00	3.51	-	0.0208	<2.00	<1.00	20.2
	03/25/08	4.33	45.4	0.203	1.27	2.25	1.61	1,200	0.0098	<0.2	0.008 <sup>9</sup>	5.69
	06/24/08	8.70	-	0.108	1.87	4.37	2.95	1,800	0.00789	0.3 <sup>9</sup>	0.016 <sup>9</sup>	13.6
	09/23/08	27.3	254	0.578	7.36	26.5	13.2	5,040	0.00776	0.4	0.075	49.7
	01/05/09	4.81	36.3	<0.500	<2.00	2.36	1.10	160	0.00422	<0.500	<1.00	5.59
	03/16/09	11.0	122	<0.500	6.68	12.7	8.64	-	0.0388	<0.500	<1.00	28.4
	09/14/09	26.8	281	3.22	18.3	52.7	20.4	-	0.0543	<0.500	<1.00	73.2
	03/16/10	38.8	566	<1.00	46.5	56.6	51.7	1,860	0.00209	<2.00	<1.00	157
	09/20/10	4.90	45.0	<2.00	<2.00	<2.00	<1.00	1,250	0.00590	<2.00	<1.00	<10.0
	03/21/11	3.0	41	<0.50	0.80 <sup>10</sup>	2.6	1.8	110	0.00232	<1.0	<1.0	8.8 <sup>10</sup>

**TABLE 4**  
**GROUNDWATER ANALYTICAL RESULTS - TOTAL METALS**  
 Willbridge Terminals  
 Portland, Oregon

	09/27/11	<5.0	43	<5.0	<5.0	<10	<5.0	720	<1.0	<5.0	<5.0	<100
	03/26/12	<5.0	11	<5.0	10	<10	<5.0	37	0.00175	<5.0	<5.0	<100
	09/24/12	6.3	39.0	<2.0	13	<20	<5.0	910	0.0013	<5.0	<5.0	<100
	03/25/13	<5	29	<2.0	<10	<20	<5.0	16	0.0008	<5.0	<5.0	<100
	09/09/13	<5.0	39	<2.0	<10	<20	<5.0	100	0.0316	<5.0	<5.0	<100
	03/03/14	<5.0	11	<2.0	<10	<20	<5.0	23	0.0006	<5.0	<5.0	<100
	08/26/14	<5.0	33	<2.0	12	<20	<5.0	150	0.00096	<5.0	<5.0	<100
	03/03/15	<5.0	20	<2.0	41	<20	<5.0	57	0.00101	<5.0	<5.0	<100
	<b>08/19/15</b>	<b>1.79 J</b>	<b>34.4</b>	<b>&lt;0.160</b>	<b>&lt;0.540</b>	<b>1.96 J</b>	<b>&lt;0.240</b>	<b>222</b>	<b>&lt;0.0490</b>	<b>&lt;0.380</b>	<b>&lt;0.310</b>	<b>&lt;2.56</b>
<b>MW-36</b>	02/16/00	14.6	57.5	0.050	4.13	6.14	3.55	-	ND	0.22	ND	13.1
	05/31/00	14.9	51.2	ND	1.80	3.08	ND	-	ND	ND	ND	
	08/24/00	18.7	57.0	ND	ND	2.22	ND	-	ND	1.11	ND	10.8
	11/30/00	22.5	70.1	ND	ND	ND	ND	-	ND	1.47	ND	ND
	02/21/01	20.1	56.0	ND	1.51	2.80	ND	-	ND	ND	ND	6.77
	05/16/01	29.7	82.6	ND	ND	16.9	ND	-	ND	ND	ND	14.9
	09/21/01	16.8	54.1	ND	ND	ND	ND	-	ND	1.08	ND	ND
	03/13/02	4.42	25.2	ND	ND	2.97	ND	-	ND	ND	ND	12.2
	03/18/03	5.41	31.6	ND	1.22	NS	ND	-	ND	ND	ND	NS
	09/24/03	43.6	116	ND	1.03	2.34	ND	-	ND	ND	ND	ND
	3/29/04	10.8	33.9	<1.00	1.31	3.85	1.44	-	<0.200	<1.00	<1.00	<5.00
	9/27/2004	32.0	67.9	<1.00	2.38	7.39	3.34	-	<0.200	1.40	<1.00	6.75
	09/21/05	33.6	56.7	<1.00	<1.00	3.07	<1.00	-	<0.200	<2.00	<1.00	<5.00
	03/15/06	5.90	23.8	<1.00	<1.00	3.84	<1.00	-	<0.200	<2.00	<1.00	<5.00
	09/27/06	17.6	54.5	<0.0752	<0.800	1.70	<0.432	-	<0.00500	<1.60	<0.0960	4.50
dup	09/27/06	15.7	48.0	<0.0752	<0.800	1.60	<0.432	-	<0.00500	<1.60	<0.0960	<4.00
	03/22/07	8.58	33.4	<0.0752	<0.800	2.64	0.652	-	0.00540	<1.60	<0.0960	6.28
	09/18/07	18.9	51.0	<1.00	<1.00	<2.00	<1.00	-	<0.00500	<2.00	<1.00	<5.00
dup	09/18/07	30.4	78.3	<1.00	<1.00	4.49	1.07	-	<0.00500	<2.00	<1.00	9.78
	03/25/08	8.28	28.6	0.032	0.64	3.85	0.702	1,510	0.0071	<0.2	0.005 <sup>9</sup>	5.45
	09/23/08	21.6	64.4	0.018	0.67	2.46	0.652	3,570	0.00443	0.8	0.018	2.80
	03/16/09	24.2	56.5	<0.500	<2.00	3.56	2.70	-	0.00608	<0.500	<1.00	5.42
	09/14/09	29.3	77.6	<0.500	<2.00	3.02	1.75	-	0.00790	<0.500	<1.00	<5.00
dup	09/14/09	30.8	80.8	<0.500	<2.00	2.85	1.67	-	0.00411	<0.500	<1.00	<5.00
	03/16/10	9.94	31.6	<1.00	<2.00	3.27	2.87	2,100	0.00579	<1.00	<1.00	<10.0
	09/20/10	38.0	144	<1.00	<2.00	2.87	1.34	7,550	0.00737	<10.0	<1.00	<10.0
	03/21/11	<1.0	15	<0.50	<2.0	<2.0	<1.0	740	0.00211	<1.0	<1.0	3.5 <sup>10</sup>
	09/27/11	6.9	99	<5.0	19	<10	<5.0	13,000	<1.0	<5.0	<5.0	<100
	03/26/12	<5.0	22	<5.0	<5.0	<10	<5.0	290	0.00301	<5.0	<5.0	<10.0
	09/24/12	6.7	33.0	<2.0	<10	<20	<5.0	4,000	0.0031	<5.0	<5.0	<100
	03/25/13	<5.0	24	<2.0	<10	<20	<5.0	640	0.0029	<5.0	<5.0	<100
	09/09/13	11.0	44	<2.0	<10	<20	<5.0	5,000	0.0035	<5.0	<5.0	<100
	03/03/14	<5.0	26	<2.0	<10	<20	<5.0	110	0.0020	<5.0	<5.0	<100
	08/26/14	19	62	<2.0	<10	<20	<5.0	3,800	0.00203	<5.0	<5.0	<100
	03/03/15	<5.0	37	<2.0	17	<20	<5.0	2,100	0.0083	<5.0	<5.0	<100
	<b>08/19/15</b>	<b>35.3</b>	<b>164</b>	<b>&lt;0.160</b>	<b>0.882 J</b>	<b>2.12 J</b>	<b>0.431 J</b>	<b>3,870</b>	<b>&lt;0.0490</b>	<b>&lt;0.380</b>	<b>&lt;0.310</b>	<b>3.91 J</b>

**TABLE 4**  
**GROUNDWATER ANALYTICAL RESULTS - TOTAL METALS**  
 Willbridge Terminals  
 Portland, Oregon

<b>MW-37</b>	02/16/00	18.4	74.8	0.220	7.21	11.8	4.69	-	ND	0.32	ND	18.4
	05/30/00	19.9	56.7	ND	3.56	5.72	1.80	-	ND	1.58	ND	11.1
dup	05/30/00	18.9	58.6	ND	4.08	6.37	2.05	-	ND	ND	ND	12.1
	08/24/00	22.7	45.3	ND	ND	ND	ND	-	ND	1.58	ND	5.98
	11/30/00	22.1	69.3	ND	4.19	6.05	3.53	-	ND	1.23	ND	12.3
	02/21/01	22.3	40.4	ND	1.53	2.06	ND	-	ND	ND	ND	5.26
	05/16/01	20.9	40.3	ND	ND	ND	ND	-	ND	ND	ND	ND
	09/21/01	22.2	43.2	ND	1.27	ND	1.47	-	ND	ND	ND	ND
	09/27/02	19.0	42.9	ND	ND	ND	ND	-	ND	ND	ND	ND
dup	09/27/02	19.4	42.3	ND	ND	ND	ND	-	ND	ND	ND	9.23
	03/18/03	8.64	25.9	ND	ND	NS	ND	-	ND	ND	1.41	NS
	09/27/04	24.2	67.9	<1.00	3.08	5.65	3.34	-	<0.200	<1.00	<1.00	18.1
	03/29/05	15.3	30.0	<1.00	0.230	<1.00	0.580	-	<0.200	<1.00	<1.00	4.49
	09/21/05	19.4	39.0	<1.00	<1.00	<2.00	1.44	-	<0.200	<2.00	<1.00	<5.00
	03/15/06	12.0	49.3	<1.00	<1.00	<2.00	1.41	-	<0.200	<2.00	<1.00	9.59
	09/27/06	19.9	39.4	<0.0752	<0.800	<1.60	<0.432	-	<0.00500	<1.60	<0.0960	<4.00
	03/22/07	21.0	46.8	0.173	<0.800	<1.60	0.81	-	<0.00500	<1.60	<0.0960	8.43
	09/18/07	23.6	37.8	<1.00	<1.00	<2.00	3.08	-	<0.00500	<2.00	<1.00	8.03
	03/25/08	22.1	54.2	0.617	1.26	2.77	1.91	2,300	0.0034	<0.2	0.016 <sup>9</sup>	11.4
dup	03/25/08	24.9	68.0	1.01	1.55	2.99	2.52	2,180	0.0078	<0.2	0.019 <sup>9</sup>	10.9
	06/24/08	18.0	-	0.084	0.380	0.390	0.39	2,490	0.00064	<0.29	0.004 <sup>9</sup>	2.60
	09/23/08	18.7	42.0	0.270	0.37	0.89	1.29	2,530	0.00223	0.4	0.019	4.47
dup	09/23/08	19.0	41	0.198	0.29	0.77	1.16	2,560	0.00197	0.4	0.009	4.92
	01/05/09	19.0	35.2	0.673	<2.00	<2.00	1.80	1,730	0.00267	<0.500	<1.00	14.8
	03/16/09	19.8	31.0	<0.500	<2.00	<2.00	3.52	-	0.00114	<0.500	<1.00	<5.00
	09/14/09	16.2	29.8	<0.500	<2.00	<2.00	<1.00	-		<0.500	<1.00	<5.00
	03/16/10	9.77	27.5	<1.00	<2.00	2.06	8.98	1,310	0.0131	<1.00	<1.00	<10.0
dup	03/16/10	9.42	27.3	<1.00	<2.00	<2.00	7.52	1,380	0.00794	<1.00	<1.00	<10.0
	09/20/10	15.7	22.1	<1.00	<2.00	<2.00	3.11	2,070	0.00171	<10.0	<1.00	<10.0
dup	09/20/10	16.0	22.5	<1.00	<2.00	<2.00	2.56	2,090	0.00266	<10.0	<1.00	<10.0
	03/21/11	4.0	20	<0.50	<2.0	<2.0	1.7	960	0.00352	<1.0	<1.0	9.2 <sup>10</sup>
dup	03/21/11	2.3	18	<0.50	<2.0	<2.0	1.3	910	0.00274	<1.0	<1.0	5.8 <sup>10</sup>
	09/27/11	19	26	<5.0	<5.0	<10	<5.0	2,600	<1.0	<5.0	<5.0	<100
dup	09/27/11	19	26	<5.0	<5.0	<10	<5.0	2,500	<1.0	<5.0	<5.0	<100
	03/26/12	<5.0	23	<5.0	10	<10	7.5	230	0.00079	<5.0	<5.0	<100
dup	03/26/12	<5.0	19	<5.0	12	<10	<5.0	210	0.0008	<5.0	<5.0	<100
	09/24/12	18	25.0	<2.0	<10	<20	<5.0	1,800	0.0011	<5.0	<5.0	<100
dup	9/24/12	18.0	25.0	<2.0	<10	<20	<5.0	1,800	0.00118	<5.0	<5.0	<100
	03/25/13	9.2	41	<2.0	<10	<20	<5.0	1,600	0.0005	<5.0	<5.0	<100
dup	3/25/13	<5.0	16	<2.0	<10	<20	<5.0	540	0.00046	<5.0	<5.0	<100
	09/09/13	14	30	<2.0	<10	<20	<5.0	2,100	0.00077	<5.0	<5.0	<100
dup	09/09/13	14	32	<2.0	75.0	<20	<5.0	2,100	0.00071	<5.0	<5.0	<100
	03/03/14	8	27	<2.0	<10	<20	<5.0	2,100	0.00056	<5.0	<5.0	<100
	08/26/14	19	27	<2.0	<10	<20	<5.0	1,400	0.00093	<5.0	<5.0	<100
dup	08/26/14	18	26	<2.0	<10	<20	<5.0	1,400	0.00076	<5.0	<5.0	<100

**TABLE 4**  
**GROUNDWATER ANALYTICAL RESULTS - TOTAL METALS**  
 Willbridge Terminals  
 Portland, Oregon

	03/03/15	<5.0	16	<2.0	<10	<20	<5.0	80	0.00086	<5.0	<5.0	<100
dup	03/03/15	<5.0	17	<2.0	40	<20	<5.0	81	0.00077	<5.0	<5.0	<100
	<b>08/19/15</b>	<b>15.6</b>	<b>30.3</b>	<b>&lt;0.160</b>	<b>&lt;0.540</b>	<b>0.933 J</b>	<b>0.667 J</b>	<b>1,980 O1 V</b>	<b>&lt;0.0490</b>	<b>&lt;0.380</b>	<b>&lt;0.310</b>	<b>&lt;2.56</b>
<b>MW-40</b>	02/16/00	22.1	185	0.110	20.2	28.9	25.4	-	ND	0.47	0.12	66.9
	05/30/00	25.0	107	ND	7.83	10.7	8.37	-	ND	ND	ND	24.5
	08/24/00	27.0	123	ND	1.62	3.16	1.41	-	ND	3.85	ND	16.0
	11/30/00	31.9	144	ND	4.33	7.34	4.91	-	ND	1.87	ND	17.8
	02/21/01	38.7	119	ND	3.75	6.07	3.30	-	ND	ND	ND	18.3
	05/16/01	23.9	102	ND	2.24	3.14	1.93	-	ND	ND	ND	8.62
	09/21/01	24.8	106	ND	3.06	3.43	2.54	-	ND	2.32	ND	10.7
	03/13/02	12.6	53.8	ND	1.97	3.36	1.94	-	ND	ND	ND	12.4
	09/27/02	28.1	219	ND	8.81	10.4	8.08	-	ND	ND	ND	25.0
	03/18/03	17.4	48.5	ND	1.35	NS	1.30	-	ND	ND	ND	NS
	09/24/03	44.8	254	ND	8.95	13.1	31.6	-	ND	ND	ND	32.6
dup	09/24/03	67.8	397	ND	17.9	24.9	53.8	-	ND	ND	ND	62.7
	03/29/04	19.0	89.7	<1.00	1.24	2.64	1.24	-	<0.200	<2.00	<1.00	<5.00
dup	03/29/04	17.8	79.7	<1.00	7.19	<2.00	1.28	-	<0.200	<2.00	<1.00	<5.00
	9/27/2004	61.1	343	<1.00	17.9	29.3	30.8	-	<0.200	<2.00	<1.00	76.4
	3/29/2005	19.8	62.7	<1.00	0.380	3.60	2.29	-	<0.200	0.480	<1.00	7.18
	09/21/05	29.5	80.7	<1.00	<1.00	4.34	1.26	-	<0.200	<2.00	<1.00	5.92
	03/15/06	16.2	54.0	<1.00	1.39	3.68	1.57	-	<0.200	<2.00	<1.00	7.58
	03/22/07	19.1	53.8	<0.0752	<0.800	2.05	0.886	-	0.00558	<1.60	<0.0960	7.51
	09/18/07	22.0	91.4	<1.00	<1.00	<2.00	<1.00	-	<0.00500	<2.00	<1.00	5.58
	03/25/08	15.7	46.6	0.008	0.430	0.56	0.365	1,950	0.0023	0.4 <sup>9</sup>	<0.003	5.25
	09/23/08	104	527	0.013	1.48	3.00	2.35	3,840	0.0158	0.4	0.012	9.64
	03/16/09	23.0	83.7	<0.500	<2.00	<2.00	<1.00	-	0.00280	<0.500	<1.00	<5.00
	09/14/09	19.3	85.1	<0.500	<2.00	<2.00	<1.00	-	0.00359	<0.500	<1.00	9.61
	03/16/10	15.3	50.1	<1.00	<2.00	<2.00	<1.00	2,050	0.119	<1.00	<1.00	<10.0
	09/20/10	19.4	88.7	<1.00	<2.00	<2.00	<1.00	3,600	0.00166	<10.0	<1.00	<10.0
	03/21/11	4.7	23	<0.50	<2.0	<2.0	<1.0	1,200	0.00152	<1.0	<1.0	5.4 <sup>10</sup>
	09/27/11	25	51	<5.0	<5.0	<10	<5.0	3,800	<1.0	<5.0	<5.0	<100
	03/26/12	19	53	<5.0	5.8	<10	<5.0	2,500	0.00046	<5.0	<5.0	<100
	09/24/12	29	64.0	<2.0	<10	<20	<5.0	3,700	0.0005	<5.0	<5.0	<100
	03/25/13	<5.0	16	<2.0	<10	<20	<5.0	510	0.0007	<5.0	<5.0	<100
	09/09/13	27.0	53	<2.0	<10	<20	<5.0	3,700	0.0005	<5.0	<5.0	<100
	03/03/14	<5.0	24	<2.0	<10	<20	<5.0	390	0.0005	<5.0	<5.0	<100
	08/26/14	25	45	<2.0	<10	<20	<5.0	3,300	0.00035	<5.0	<5.0	<100
	03/03/15	5.9	26	<2.0	<10	<20	<5.0	710	0.00051	<5.0	<5.0	<100
	<b>08/19/15</b>	<b>25.3</b>	<b>45.4</b>	<b>&lt;0.160</b>	<b>&lt;0.540</b>	<b>&lt;0.520</b>	<b>&lt;0.240</b>	<b>2,980</b>	<b>&lt;0.0490</b>	<b>&lt;0.380</b>	<b>&lt;0.310</b>	<b>&lt;2.56</b>
<b>PHILLIPS</b>												
B-4	05/26/00	35.0	245	ND	27.5	42.5	14.0	-	ND	ND	ND	75.0
dup	05/26/00	36.7	259	ND	28.3	44.3	14.7	-	ND	ND	ND	78.5
	08/28/00	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	-	NS/F	NS/F	NS/F	NS/F
	11/29/00	31.6	106	ND	5.32	9.68	2.85	-	ND	1.65	ND	17.6
	02/20/01	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	-	NS/F	NS/F	NS/F	NS/F

**TABLE 4**  
**GROUNDWATER ANALYTICAL RESULTS - TOTAL METALS**  
 Willbridge Terminals  
 Portland, Oregon

	05/17/01	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	-	NS/F	NS/F	NS/F	NS/F
	09/26/02	30.8	99.9	ND	5.41	8.85	2.72	-	ND	1.29	ND	25.9
	09/25/03	31.6	92.8	ND	2.58	4.97	1.55	-	ND	1.29	ND	14.7
	09/26/06	36.1	113	<1.00	3.84	6.73	2.31	-	<0.200	<2.00	<1.00	21.6
	03/21/07	33.8	95.5	<1.00	1.82	3.62	1.59	-	<0.200	<1.00	<1.00	18.2
	09/20/07	39.5	89.1	<0.800	1.29	4.21	0.898	-	<0.200	<1.60	<0.800	15.8
	03/26/08	33.6	268	<1.00	27.8	47.6	17.0	32,207	<0.200	<2.00	<1.00	101
	09/24/08	33.3	189	0.617	9.07	13.5	4.22	3,850	<0.200	0.525	<1.00	71.3
dup	09/24/08	37.3	192	2.30	15.0	23.3	6.50	4,300	<0.200	0.535	<1.00	75.7
B-35	02/17/00	60.2	480	0.620	89.3	122	82.8	-	ND	1.64	0.21	311
	05/26/00	10.2	116	ND	7.86	11.4	2.64	-	ND	1.3	ND	23.3
	08/28/00	37.7	128	1.53	4.67	6.12	6.43	-	ND	ND	ND	33.9
	11/29/00	46.8	131	ND	3.16	6.91	6.19	-	ND	2.12	ND	20.8
	02/23/01	34.7	81.6	ND	2.00	3.8	3.05	-	ND	1.00	ND	30.8
	05/17/01	50.4	153	ND	10.7	14.1	10.6	-	ND	ND	ND	51.1
	09/20/01	34.4	90.1	ND	1.78	4.2	1.60	-	ND	ND	ND	6.32
	03/14/02	33.5	308	ND	46.3	53.4	29.8	-	ND	1.39	1.45	146
	09/26/02	29.6	225	ND	29.8	31.4	14.7	-	ND	1.31	ND	81.6
	03/18/03	38.7	95.8	ND	1.55	4.22	2.77	-	ND	ND	ND	7.00
	09/25/03	51.7	132	ND	3.34	6.31	5.36	-	ND	ND	ND	17.1
	03/30/04	29.1	135	<1.00	11.9	14.9	7.79	-	<0.200	<1.00	<1.00	15.2
	09/28/04	42.2	182	<1.00	8.29	-	9.93	-	1.71	<1.00	<1.00	-
	03/28/05	38.1	160	<1.00	12.4	18.0	15.6	-	<0.200	<1.00	<1.00	77.6
	09/20/05	42.6	282	<1.00	32.9	40.8	30.6	-	<0.200	<2.00	<1.00	107
	03/14/06	42.3	105	<1.00	1.92	5.34	2.85	-	<0.200	<2.00	<1.00	39.6
	09/26/06	38.7	116	<1.00	2.33	4.24	3.44	-	<0.200	<2.00	<1.00	23.3
	03/21/07	33.6	272	<1.00	26.5	27.0	20.7	-	<0.200	<1.00	<1.00	114
	09/20/07	39.8	135	<0.800	7.66	12.1	5.65	-	<0.200	<1.60	<0.800	38.6
	03/27/08	61.0	498	<3.80	82.5	144	91.4	6,180	<0.200	<50.0	0.255	388
	09/24/08	55.6	347	<1.00	48.8	57.2	31.5	5,290	<0.200	<1.00	<2.00	369
	03/23/09	34.9	68.1	<0.500	<2.00	<2.00	<1.00	3,730	0.0257	<0.500	<1.00	<5.00
	09/18/09	36.6	158	<0.500	16.5	18.8	14.6	3,870	0.0151	<0.500	<1.00	67.8
dup	09/18/09	42.8	176	<0.500	<20.0	29.7	18.5	4,270	0.0170	<0.500	<1.00	85.3
	03/31/10	4.45	22.8	<1.00	<2.00	<2.00	<1.00	311	<0.00500	<1.00	<1.00	<10.0
	03/24/11	40.7	96.9	<1.00	<2.00	<2.00	<1.00	3,140	<0.00500	<1.00	<1.00	<10.0
dup	03/24/11	60.8	183	<1.00	5.70	9.30	6.55	3,350	<0.00500	<1.00	<1.00	34.4
	09/27/11	42.8	145	<5.00	10.0	15.8	11.2	4,140	0.0141	<5.00	<5.00	<50.0
	03/28/12	40	100	<1.9	5.1	7.4	5	3,600	0.0071	0.72 J	0.040 J	32
	10/02/12	37	81.0	<1.0	2.2	2.8	1.8	3,700	0.0020	<1.0	<1.0	11
	04/02/13	41.0	110	<1.0	17.0	7.4	3.8	3,500	0.0008	<1.0	<1.0	23
	09/12/13	48.0	90	<1.0	<2.0	<2.0	1.2	3,700	0.0017	<1.0	<1.0	<10
	03/10/14	37	98	<1.0	15	6.6	4.7	3,200	0.0059	<1.0	<1.0	24
	09/08/14	48	130	<1.0	8.2	8.9	5.8	3,600	0.0083	<1.0	<1.0	28
dup	09/08/14	52	140	<1.0	7.6	8.6	6.1	3,600	0.0077	<1.0	<1.0	28
	03/10/15	44	150	<2.0	11	10	7.9	3,900	0.0080	<5.0	<2.0	<35

**TABLE 4**  
**GROUNDWATER ANALYTICAL RESULTS - TOTAL METALS**  
 Willbridge Terminals  
 Portland, Oregon

	09/17/15	98	180	<2.0	3.6	<10	3.1	4,100	<0.0005	<5.0	<2.0	<35
<b>B-36</b>	02/17/00	10.5	168	0.210	22.2	30.6	7.79	-	ND	0.64	ND	55.1
	5/26/00	10.5	120	ND	8.19	12.0	2.51	-	ND	ND	ND	25.0
	8/28/00	22.4	156	ND	7.84	8.76	3.22	-	ND	ND	ND	47.4
	11/29/00	22.3	130	ND	5.25	8.34	1.71	-	ND	2.02	ND	17.1
	02/23/01	48.8	174	ND	3.71	6.66	1.42	-	ND	2.34	ND	24.4
	05/17/01	38.7	476	ND	57.2	69.6	16.5	-	ND	3.01	ND	138
	09/20/01	18.5	86.1	ND	1.54	3.02	ND	-	ND	ND	ND	7.61
dup	09/20/01	20.4	97.4	ND	2.94	4.11	ND	-	ND	ND	ND	13.2
	03/14/02	8.40	90.1	ND	8.74	11.4	2.71	-	ND	ND	ND	29.4
	09/26/02	17.0	109	ND	6.88	9.1	4.40	-	ND	ND	ND	33.4
	03/18/03	4.02	40.9	ND	2.34	3.93	1.44	-	ND	ND	ND	7.29
	09/25/03	20.0	64.4	ND	ND	ND	ND	-	ND	1.05	ND	ND
	03/30/04	7.19	58.6	<1.00	3.13	5.80	1.49	-	<0.200	<1.00	<1.00	15.2
	09/28/04	23.3	112	<1.00	3.49	-	1.20	-	0.285	<1.00	<1.00	-
dup	09/28/04	22.1	81.4	<1.00	2.22	-	<1.00	-	<0.200	<1.00	<1.00	-
	03/28/05	24.0	104	<1.00	3.67	4.82	1.53	-	<0.200	<1.00	<1.00	19.5
	09/20/05	20.5	103	<1.00	4.50	6.37	1.45	-	<0.200	<2.00	<1.00	13.2
	03/14/06	8.03	40.1	<1.00	<1.00	3.31	<1.00	-	<0.200	<2.00	<1.00	5.31
	09/26/06	21.7	87.4	<1.00	<1.00	<2.00	<1.00	-	<0.200	<2.00	<1.00	6.71
	03/21/07	15.1	259	<1.00	28.4	38.4	9.70	-	<0.200	<1.00	<1.00	81.2
	09/20/07	24.1	169	<0.800	11.2	18.0	4.47	-	<0.200	<1.60	<0.800	50.0
	03/27/08	18.0	397	<0.380	46.7	77.3	18.6	3,890	0.202	<5.00	0.203	168
	09/24/08	23.3	162	<0.500	13.5	17.6	4.06	5,720	<0.200	<0.500	<1.00	54.2
	03/23/09	18.2	334	<0.500	44.3	62.2	16.7	3,130	0.0750	<0.500	<1.00	125
dup	03/23/09	19.9	455	<0.500	55.8	81.1	21.5	3,740	0.0843	0.584	<1.00	160
	09/18/09	11.3	67.0	<0.500	<2.00	2.02	<1.00	3,830	0.0402	<0.500	<1.00	7.05
	03/31/10	39.7	67.0	<1.00	<2.00	<2.00	<1.00	2,840	0.00601	<1.00	<1.00	<10.0
	09/23/10	14.2	112	<1.00	5.45	10.1	2.54	2,590	0.0127	<5.00	<1.00	21.2
dup	09/23/10	15.0	118	<1.00	5.65	10.3	2.60	2,630	0.0136	<5.00	<1.00	23.0
	03/24/11	<1.00	20.6	<1.00	<2.00	<2.00	<1.00	1,330	<0.00500	<1.00	<1.00	<10.0
	09/27/11	15.9	170	<5.00	15.6	25.8	29.0	3,550	0.0363	<5.00	<5.00	121
	03/28/12	7.9	120	<1.9	16	24	5.8	1,700	0.034	0.34 J	0.055 J	44
dup	03/28/12	12	220	<0.95	32	41	11	2,100	0.026	0.53 J	0.10 J	79
	10/02/2012	16	97	<1.0	7	11	3	4,800	0.32	<1.0	<1.0	22
dup	10/02/2012	16	100.0	<1.0	8.8	9.7	2.8	4,400	0.3000	<1.0	<1.0	22
	04/02/13	13.0	77	<1.0	23.0	9.9	1.9	2,500	0.0035	<1.0	<1.0	19
	09/12/13	17.0	81	<1.0	2.0	3.8	1.3	4,200	0.0072	<1.0	<1.0	19
	03/13/14	11	61	<1.0	3.5	4.7	<1.0	1,200	0.0061	<1.0	<1.0	14
	09/08/14	19	120	<1.0	9.5	12.0	3.2	3,900	0.0120	<1.0	<1.0	24
	03/10/15	30	140	<2.0	5.7	<10	2.9	3,000 <sup>13</sup>	0.0082	<5.0	<2.0	<35
dup	03/10/15	32	150	<2.0	7.5	<10	3.2	3,200	0.0066	<5.0	<2.0	<35
	<b>09/17/15</b>	<b>21</b>	<b>99</b>	<b>&lt;2.0</b>	<b>2.4</b>	<b>&lt;10</b>	<b>2.5</b>	<b>4,300</b>	<b>0.0014</b>	<b>&lt;5.0</b>	<b>&lt;2.0</b>	<b>&lt;35</b>
<b>B-37</b>	02/17/00	369	152	0.330	15.9	29.7	7.05	-	ND	1.59	ND	54.4
dup	02/17/00	327	34.4	0.400	0.660	1.45	2.36	-	ND	0.25	ND	1.59

**TABLE 4**  
**GROUNDWATER ANALYTICAL RESULTS - TOTAL METALS**  
 Willbridge Terminals  
 Portland, Oregon

	05/26/00	418	92.0	ND	5.26	13.1	2.34	-	ND	ND	ND	ND	21.5
	08/28/00	897	227	ND	4.62	9.38	2.09	-	ND	ND	ND	ND	30.3
	11/29/00	391	99.0	ND	2.21	6.08	ND	-	ND	1.32	ND	ND	12.0
	02/23/01	198	74.7	ND	ND	3.39	ND	-	ND	ND	ND	ND	17.0
	05/17/01	521	168	ND	4.08	9.84	1.64	-	ND	ND	ND	ND	35.5
	03/14/02	86.9	252	ND	17.0	40.9	7.46	-	ND	ND	ND	ND	76.4
	09/26/02	117	119	ND	6.03	10.0	6.25	-	ND	ND	ND	ND	34.8
	03/18/03	75.8	121	ND	8.29	17.8	4.29	-	ND	ND	ND	2.22	53.9
dup	03/18/03	68.3	95.8	ND	5.72	11.5	2.88	-	ND	ND	ND	1.41	36.4
	09/25/03	260	158	ND	2.90	8.53	1.19	-	ND	1.69	ND	ND	21.5
dup	09/25/03	247	182	ND	5.13	14.3	2.17	-	ND	ND	ND	ND	33.0
	03/31/04	125	54.6	<1.00	1.37	4.54	1.31	-	<0.200	<1.00	<1.00	<1.00	8.42
	09/28/04	131	78.4	<1.00	2.18	-	<1.00	-	<0.200	<1.00	<1.00	<1.00	-
	03/28/05	73.4	79.8	<1.00	1.87	5.93	1.57	-	<0.200	<1.00	<1.00	<1.00	27.0
	09/20/05	80.2	82.7	<1.00	1.15	2.29	<1.00	-	<0.200	<2.00	<1.00	<1.00	13.3
	03/14/06	230	61.6	<1.00	<1.00	4.34	<1.00	-	<0.200	<2.00	<1.00	<1.00	6.15
dup	03/14/06	217	72.0	<1.00	1.10	4.81	<1.00	-	<0.200	<2.00	<1.00	<1.00	8.20
	09/26/06	165	61.3	<1.00	<1.00	2.88	<1.00	-	<0.200	<2.00	<1.00	<1.00	11.0
	03/21/07	151	45.8	<1.00	<1.00	<1.00	<1.00	-	<0.200	<1.00	<1.00	<1.00	<10.0
	09/20/07	97.8	66.6	<0.800	1.28	3.92	0.963	-	<0.200	<1.60	<0.800	<0.800	14.3
	03/27/08	140	78.7	<0.380	4.55	10.6	3.15	1,470	<0.200	<5.00	<0.120	<33.0	
	09/24/08	186	98.4	<0.500	6.22	10.4	4.18	2,230	<0.200	<0.500	<1.00	<1.00	27.6
	03/20/09	214	96.9	<0.500	4.21	10.5	4.64	1,450	0.0357	<0.500	<1.00	<1.00	26.4
dup	03/20/09	218	69.9	<0.500	2.05	6.42	2.92	1,480	0.0107	<0.500	<1.00	<1.00	18.1
	09/18/09	276	34.9	<0.500	<2.00	<2.00	<1.00	1,710	<0.00500	<0.500	<1.00	<1.00	<5.00
	03/31/10	334	37.7	<1.00	<2.00	<2.00	<1.00	1,500	<0.00500	<1.00	<1.00	<1.00	<10.0
dup	03/31/10	312	38.2	<1.00	<2.00	<2.00	<1.00	1,700	0.0105	<1.00	<1.00	<1.00	<10.0
	09/23/10	197	41.4	<1.00	<2.00	<2.00	<1.00	1,710	0.00556	<5.00	<1.00	<1.00	<10.0
	03/24/11	111	85.4	<1.00	4.06	10.8	3.80	1,650	0.0132	<1.00	<1.00	<1.00	35.1
	09/28/11	138	41.3	<1.00	<2.00	<2.00	<1.00	1,660	<0.00500	<1.00	<1.00	<1.00	<10.0
	03/28/12	0.12	91.0	<0.00095	0.0060 J	0.014	0.0047 J	2,000	0.0074	<0.00046	<0.000090	0.035 J	
B-40	02/17/00	NS/S	NS/S	NS/S	NS/S	NS/S	NS/S	-	NS/S	NS/S	NS/S	NS/S	
	05/26/00	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	-	NS/F	NS/F	NS/F	NS/F	
	08/28/00	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	-	NS/F	NS/F	NS/F	NS/F	
	11/29/00	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	-	NS/F	NS/F	NS/F	NS/F	
	02/20/01	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	-	NS/F	NS/F	NS/F	NS/F	
	05/17/01	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	-	NS/F	NS/F	NS/F	NS/F	
	09/26/06	18.4	67.3	<0.0752	<0.800	3.67	<0.432	-	<0.00500	<1.60	<0.0960	<0.0960	16.6
	03/20/07	21.4	80.8	<0.752	1.85	7.12	2.01	-	<0.00500	<1.60	<0.800	<0.800	57.0
	09/20/07	24.2	64.0	<0.800	<0.800	1.85	<0.800	-	<0.00500	<1.60	<0.800	<0.800	13.6
	03/26/08	20.9	145	<1.00	14.0	32.8	9.28	ND	<0.200	<2.00	<1.00	<1.00	150
	09/22/08	NS	NS	NS	NS	NS	NS	ND	NS	NS	NS	NS	
	09/17/13	25	120	<1.0	9.1	21	6.9	3,700	0.021	<1.0	<1.0	<1.0	290

**TABLE 4**  
**GROUNDWATER ANALYTICAL RESULTS - TOTAL METALS**  
 Willbridge Terminals  
 Portland, Oregon

	09/08/14	15	61	<1.0	<2.0	4.7	1.0	2,800	0.011	<1.0	<1.0	52
	03/12/15	14	40	<2.0	2.8	13	2.2	1,100	0.011	<5.0	<2.0	<35
	<b>09/17/15</b>	<b>15</b>	<b>76</b>	<b>&lt;2.0</b>	<b>4.2</b>	<b>&lt;10</b>	<b>&lt;2.0</b>	<b>2,600</b>	<b>0.00063</b>	<b>&lt;5.0</b>	<b>&lt;2.0</b>	<b>&lt;35</b>
<b>OF-1</b>	03/26/08	56.4	290	11.2	25.0	74.9	28.9	ND	<0.200	<2.00	<1.00	242
	09/22/08	NS	NS	NS	NS	NS	NS	ND	NS	NS	NS	NS
	09/18/09	38.5	114	1.69	3.63	15.2	4.36	3,190	0.0126	<0.50	<1.00	39.7
	03/31/10	2.73	12.8	<1.00	<2.00	<2.00	<1.00	169	<0.00500	<1.00	<1.00	<10.0
	09/23/10	13.8	81.2	1.30	5.99	16.1	5.95	949	0.0130	<1.00	<1.00	49.5
	03/24/11	1.38	11.3	<1.00	<2.00	<2.00	<1.00	103	<0.00500	<1.00	<1.00	<10.0
	09/28/11	21.5	25.7	<1.00	<2.00	<2.00	<1.00	946	<0.00500	<1.00	<1.00	<10.0
<b>P-1</b>	03/17/03	22.5	1270	ND	216	239	94.6	ND	0.604	ND	ND	625
	03/31/04	52.7	4370	<10.0	642	848	244	ND	0.816	<10.0	<10.0	1,730
	03/14/06	3.34	141	1.68	20.5	29.1	7.79	ND	<0.200	<2.00	<1.00	64.6
	09/26/06	14.0	1210	4.58	130	185	41.8	-	0.300 <sup>4,5</sup>	<1.60	0.732	358
	03/20/07	<0.800	20.8	<0.752	2.26	3.11	<0.800	-	<0.00500	<1.60	<0.800	6.98
	09/20/07	-	-	-	-	-	-	<1.0	0.0665	-	-	-
	Well Abandoned											
<b>P-1A</b>	01/28/08	9.79	-	0.632	32.6	35.3	44.4	-	0.217	-	-	180
	03/26/08	6.99	233	<1.00	28.3	36.9	28.2	797 <sup>7</sup>	<0.200	<2.00	<1.00	151
	06/25/08	1.60	55.4	0.746	2.26	6.51	4.48	892	<0.200	<0.500	<1.00	54.2
	09/23/08	8.17	349	<5.00	36.2	51.4	30.2	2,400	<0.200	<5.00	<1.00	234
	01/07/09	1.46	26.0	0.690	3.92	7.03	4.18	72.0	<0.200	<0.500	<1.00	50.7
	03/20/09	1.40	31.6	<0.500	3.60	6.57	4.33	73.6	0.0104	<0.500	<1.00	37.6
	09/18/09	2.19	67.1	<0.500	5.74	9.38	5.55	1,210	0.00933	<0.500	<1.00	59.4
	03/31/10	3.18	69.7	<1.00	7.16	10.7	8.35	276	0.0335	<1.00	<1.00	55.9
	09/23/10	13.2	575	1.83	51.2	86.1	59.9	3,490	0.240	<5.00	<1.00	411
	03/24/11	5.42	66.4	<1.00	5.03	10.0	9.55	873	0.0142	<1.00	<1.00	71.6
	09/27/11	86.2	592	<5.00	54.9	109	84.6	6,800	0.00717	<5.00	<5.00	629
dup	09/27/11	-	-	-	-	-	-	-	0.00817	-	-	-
	3/28/12	18	310	0.51 J	24	35	37	1,000	0.051	0.48 J	0.15 J B	230
	10/04/2012	11	90	<1.0	4.2	5.6	5.1	4,400	0.028	<1.0	<1.0	51
dup	10/05/2012	11	93	<1.0	4.6	6.1	5.3	4,700	0.030	<1.0	<1.0	54
	04/03/13	6.6	67.0	<1.0	5.1	9	4.6	2,500	0.0051	<1.0	<1.0	38
dup	04/03/13	5.3	69	<1.0	6.9	9.7	5.5	1,900	0.0044	<1.0	<1.0	44
	09/12/13	7.4	48	<1.0	<2.0	3	2.4	3,800	0.0095	<1.0	<1.0	<100
	03/11/14	6.8	100	<1.0	14.0	21	18	860	0.015	<1.0	<1.0	140
dup	03/11/14	5.2	78	<1.0	5.0	16	12	640	0.016	<1.0	<1.0	100
	09/03/14	11.0	54	<1.0	3.2	5.7	3.5	3,900	0.012	<1.0	<1.0	36
dup	09/03/14	11	50	<1.0	2.5	4.6	2.9	3,800	0.013	<1.0	<1.0	32
	03/11/15	14	40	<2.0	2.8	13	2.2	3,700	0.011	<5.0	<2.0	<35
dup	03/11/15	13	110	<2.0	7.7	13	9.1	4,000	0.013	<5.0	<2.0	66
<b>U-2</b>	02/17/00	18.6	63.2	0.230	3.63	11.6	4.99	-	ND	0.34	ND	24.1
	05/26/00	11.0	50.3	ND	1.37	5.37	1.45	-	ND	ND	ND	10.9

**TABLE 4**  
**GROUNDWATER ANALYTICAL RESULTS - TOTAL METALS**  
 Willbridge Terminals  
 Portland, Oregon

	08/28/00	11.9	50.3	1.20	1.09	3.77	1.69	-	ND	ND	ND	ND	14.7
	11/29/00	7.29	49.9	ND	1.58	3.14	1.09	-	ND	1.05	ND	ND	13.1
	02/23/01	8.87	37.3	ND	ND	9.35	1.73	-	ND	ND	ND	ND	21.2
	05/17/01	9.53	42.7	ND	1.29	9.16	2.57	-	ND	ND	ND	ND	20.5
	09/20/01	6.80	39.7	ND	ND	4.21	ND	-	ND	ND	ND	ND	7.00
	03/14/02	10.8	53.4	ND	1.68	6.66	1.83	-	ND	ND	ND	ND	43.6
	09/26/02	6.78	44.3	ND	ND	2.77	ND	-	ND	1.27	ND	ND	11.6
	03/18/03	10.0	48.7	ND	1.00	5.83	1.11	-	ND	ND	ND	ND	39.8
	09/25/03	9.78	74.9	ND	6.58	8.96	2.68	-	ND	ND	ND	ND	63.6
	03/31/04	15.8	64.6	<1.00	2.43	10.7	3.13	-	<0.200	1.16	<1.00	<1.00	50.0
	09/28/04	11.1	76.2	<1.00	3.18	-	2.82	-	<0.200	<1.00	<1.00	<1.00	-
	03/28/05	13.2	99.6	<1.00	3.26	18.7	5.31	-	<0.200	<1.00	<1.00	<1.00	94.4
	09/20/05	19.8	129	<1.00	1.74	17.0	5.50	-	<0.200	<2.00	<1.00	<1.00	52.0
	03/14/06	15.6	45.1	<1.00	<1.00	7.75	2.28	-	<0.200	<2.00	<1.00	<1.00	32.7
	09/27/06	16.0	61.7	<1.00	<1.00	19.6	<1.00	-	<0.200	<2.00	<1.00	<1.00	10.6
	03/21/07	18.1	70.2	<1.00	1.17	-	1.58	-	<0.200	<1.00	<1.00	<1.00	-
	09/19/07	13.5	92.5	<0.800	1.81	7.47	2.36	-	<0.200	<1.60	<0.800	<0.800	39.2
	03/25/08	27.6	62.0	<1.00	2.13	12.2	3.76	4,100	<0.200	<2.00	<1.00	<1.00	20.9
	09/25/08	13.4	74.0	<0.500	<2.14	8.33	<4.10	3,860	<0.200	<0.500	<1.00	<1.00	<47.5
	03/17/09	36.0	92.8	<0.500	2.17	10.8	2.88	4,310	<0.200	<0.500	<1.00	<1.00	18.7
	09/21/09	7.7	34.3	0.091	<0.50	0.86	0.66	3,570	<0.20	<0.50	<0.50	<0.50	5.7
	03/16/10	3.8	25.8	<0.40	<2.5	<2.5	0.50	2,320	<0.20	<2.5	<2.5	<2.5	<25.0
	09/20/10	1.7	2.5 <sup>11</sup>	<0.020	<0.24	<0.20	<0.020	3,010 <sup>11</sup>	<0.011	<0.10	0.37 <sup>10,11</sup>	5.4 <sup>11</sup>	
	03/22/11	1.4	8.4	0.067 <sup>10</sup>	0.21 <sup>10</sup>	1.6	0.17	546	<0.011	<0.22	<0.070	4.0 <sup>10</sup>	
	09/30/11	19.2	27.6	0.21	<0.10	0.84	0.27	3,670	0.0190 <sup>10</sup>	<0.22	<0.070	3.8 <sup>10</sup>	
	03/30/12	0.010	29	0.00029 J	0.00094 J	0.0055	0.00077 J	2,200	0.0029 J	0.00083 J	0.000080 J	0.0059 J	
	03/18/15	13	65	<2.0	2.4	<10	3.2	1,300	0.0026	<5.0	<2.0	<35	
<b>U-5</b>	<b>09/17/15</b>	<b>24</b>	<b>51</b>	<b>&lt;2.0</b>	<b>&lt;2.0</b>	<b>&lt;10</b>	<b>&lt;2.0</b>	<b>3,000</b>	<b>0.0015</b>	<b>&lt;5.0</b>	<b>&lt;2.0</b>	<b>&lt;35</b>	
U-5	02/17/00	12.7	164	0.940	17.5	45.6	18.9	-	ND	0.95	ND	ND	933
U-5	05/26/00	10.4	74.8	ND	2.25	9.12	3.70	-	ND	ND	ND	ND	286
U-5	08/28/00	10.9	219	ND	7.59	21.6	14.3	-	ND	1.65	ND	ND	884
U-5	11/29/00	12.3	124	ND	5.47	21.6	8.56	-	ND	2.16	ND	ND	825
U-5	02/23/01	12.6	101	ND	6.92	34.5	14.0	-	ND	1.00	ND	ND	1,170
U-5	05/17/01	NS/F	NS/F	NS/F	NS/F	NS/F	NS/F	-	NS/F	NS/F	NS/F	NS/F	NS/F
U-5	03/18/03	11.0	170	ND	12.9	66.3	15.8	-	ND	ND	ND	ND	3.23
U-5	09/25/03	12.6	102	ND	7.36	20.1	9.47	-	ND	1.18	ND	ND	800
U-5	03/31/04	8.02	85.2	<1.00	7.58	23.0	11.5	-	<0.200	<1.00	<1.00	<1.00	785
U-5	09/28/04	9.87	103	<1.00	6.23	-	10.6	-	0.228	<1.00	<1.00	<1.00	-
U-5	03/28/05	12.3	131	<1.00	22.9	64.5	38.1	-	<0.200	<1.00	<1.00	<1.00	1,980
U-5	09/20/05	7.04	107	<1.00	5.83	18.8	12.4	-	<0.200	<2.00	<1.00	<1.00	720
U-5	03/14/06	8.16	132	<1.00	11.7	30.7	12.7	-	<0.200	<2.00	<1.00	<1.00	669
U-5	09/26/06 <sup>2</sup>	6.21	122	0.532	9.60	31.0	15.1	-	0.0182	<3.20 <sup>3</sup>	<0.0960	1,070 <sup>3</sup>	
U-5	03/20/07	11.7	301	1.45	26.8	54.8	43.2	-	0.0248	<1.60	<0.800	2,130	
U-5	09/20/07	26.0	334	<8.00	16.7	131	22.4	-	0.0233	<16.0	<0.800	2,970	

**TABLE 4**  
**GROUNDWATER ANALYTICAL RESULTS - TOTAL METALS**  
 Willbridge Terminals  
 Portland, Oregon

	09/24/08	13.2	151.0	<1.00	13.5	46.5	192	2,910	<0.200	<1.00	<2.00	752	
	4/3/13	3.8	36	1.5	3.7	13	5.1	460	0.20	<1.0	<1.0	600	
<b>U-14</b>	09/27/06	67.4	1,970	1.84	122	159	175	-	0.558	<2.00	<1.00	496	
	03/21/07	9.93	266	<1.00	14.1	18.1	25.0	-	<0.200	1.52	<1.00	83.1	
	09/19/07	163	2,500	<0.800	83.3	106	120	-	0.452	3.10	<0.800	822	
	03/25/08	22.3	188	<1.00	11.9	14.7	21.8	949	<0.200	<2.00	<1.00	71.0	
	09/25/08	16.0	104	<0.500	3.78	6.08	10.2	2,390	<0.200	<0.500	<1.00	46.3	
	03/18/09	8.83	109	<0.500	5.49	7.25	14.0	780	<0.200	<0.500	<1.00	45.2	
	09/22/09	<2.5	27.1	<0.40	<2.5	<2.5	0.26 <sup>5</sup>	718	<0.20	<2.5	<2.5	12.6 <sup>5</sup>	
	03/16/10	<2.5	14.9	<0.40	<2.5	<2.5	<0.50	2.2 <sup>10</sup>	<0.20	<2.5	<2.5	<25.0	
	09/21/10	0.14 <sup>10</sup>	17.2 <sup>11</sup>	<0.020	0.46 <sup>10</sup>	0.52	0.12	24.4 <sup>11</sup>	<0.011	<0.10	0.19 <sup>10,11</sup>	4.5 <sup>10,11</sup>	
	03/22/11	0.24 <sup>10</sup>	14.7	<0.030	0.33 <sup>10</sup>	0.84	0.84	5.7	<0.011	<0.22	<0.070	7.4	
<b>U-15</b>	09/28/11	0.39 <sup>10</sup>	13.2	0.081	0.10 <sup>10</sup>	0.80 <sup>11</sup>	0.10	146	0.021 <sup>10</sup>	<0.22	<0.070	9.1	
	04/02/12	0.30 J	13	<0.19	<0.84	0.87 J	0.37 J	2.7	0.00090 J	0.18 J	0.020 J	<3.1	
	10/02/12	<1.0	2.2	<1.0	<2.0	<2.0	1.4	380	0.002	<1.0	<1.0	11	
	09/27/06	89.9	777	1.26	90.3	109	179	-	0.221	<2.00	<1.00	292	
	03/21/07	75.1	416	<1.00	46.1	58.1	86.3	-	<0.200	1.15	<1.00	158	
	09/19/07	126	4,790	1.99	232	388	508	-	0.780	5.38	1.42	2,150	
	03/25/08	68.5	284	<1.00	19.6	46.4	43.9	11,900	<0.200	<2.00	<1.00	146	
	09/25/08	86.7	502	<1.00	55.0	71.1	81.6	12,200	<0.200	<1.00	<2.00	239	
	03/17/09	60.8	144	<0.500	7.85	10.8	15.6	10,800	<0.200	<0.500	<1.00	72.2	
	09/21/09	58.6	71.9	<0.080	<0.50	<0.50	0.45	9,900	<0.20	<0.50	<0.50	3.6 <sup>5</sup>	
<b>U-16</b>	03/16/10	57.2	71.4	<0.40	<2.5	<2.5	0.32 <sup>10</sup>	10,600	<0.20	<2.5	<2.5	<25.0	
	09/20/10	54.3	68.6 <sup>11</sup>	0.050 <sup>10</sup>	<0.24	<0.20	0.19 <sup>11</sup>	10,500 <sup>11</sup>	<0.011	<0.10	<0.071	3.7 <sup>10,11</sup>	
	03/21/11	56.6	71.0 <sup>11</sup>	<0.030	<0.10	0.077 <sup>10</sup>	0.19	10,600	<0.011	<0.22	<0.070	<2.5	
	09/27/11	52.2	70.7	0.040 <sup>10</sup>	0.52	0.77	0.096 <sup>10</sup>	10,600	0.017 <sup>10</sup>	<0.22	<0.070	3.7 <sup>10</sup>	
	03/30/12	67	90	0.86 J	1.5 J	2.1	3.3	10,000	0.0053	0.10 J	<0.018	41	
	dup	03/30/12	68	93	1.1	1.7 J	2.4	3.6	9,900	0.0067	0.13 J	0.027 J	47
	09/27/2012	60	88	<1.0	<2.0	2.1	2.5	11,000	0.0043	<1.0	<1.0	13	
	09/27/06	85.4	866	1.31	84.7	113	111	-	1.70	<2.00	<1.00	239	
	03/21/07	112	746	1.53	76.4	113	107	-	1.35	1.74	<1.00	260	
	09/19/07	105	280	<0.800	15.6	26.2	19.1	-	0.247	<1.60	<0.800	76.4	
<b>U-17</b>	03/25/08	86.8	153	<1.00	5.82	8.59	7.97	9,970	<0.200	<2.00	<1.00	54.8	
	09/25/08	97.2	310	<0.500	20.6	29.6	27.1	10,600	0.345	0.763	<1.00	94.1	
	03/17/09	76.8	226	<0.500	11.6	16.9	16.7	9,250	<0.200	<0.500	<1.00	51.6	
	09/21/09	80.2	101	<0.40	<2.5	<2.5	<0.40 <sup>5</sup>	11,900	<0.20	<2.5	<2.5	<25.0	
	03/16/10	75.9	95.3	0.21 <sup>10</sup>	<2.5	<2.5	0.56	8,530	<0.20	<2.5	<2.5	<25.0	
	09/20/10	76.0	92.6 <sup>11</sup>	0.069 <sup>10</sup>	0.33 <sup>10</sup>	0.22 <sup>10,11</sup>	0.27 <sup>11</sup>	8,370 <sup>11</sup>	<0.011	<0.10	<0.071	3.3 <sup>10,11</sup>	
	03/21/11	63.4	86.2 <sup>11</sup>	<0.030	<0.10	1.0	0.39	7,680	<0.011	<0.22	<0.070	<2.5	
	09/27/11	74.4	80.7	<0.030	<0.10	0.25 <sup>10,11</sup>	0.14	5,760	0.019 <sup>10</sup>	<0.22	<0.070	<2.5	
	03/30/12	81	100	0.28 J	1.9 J	2.4	2.8	8,900	0.0025 J	0.15 J	0.067 J	9.2 J	
	09/27/2012	74	75	<1.0	<2.0	<2.0	<1.0	5,900	0.0020	<1.0	<1.0	<1.0	
<b>U-17</b>	09/27/06	58.1	606	<1.00	69.4	87.3	55.2	-	<0.200	<2.00	<1.00	183	
	03/21/07	23.9	141	<1.00	12.3	18.5	25.2	-	<0.200	<1.00	<1.00	45.4	

**TABLE 4**  
**GROUNDWATER ANALYTICAL RESULTS - TOTAL METALS**  
 Willbridge Terminals  
 Portland, Oregon

	09/19/07	47.6	294	<0.800	26.1	42.3	38.1	-	<0.200	<1.60	<0.800	98.2
	03/25/08	24.0	87.4	<1.00	1.98	4.21	5.56	4,380	<0.200	<2.00	<1.00	13.8
	09/25/08	24.7	111	<0.500	10.2	14.8	10.9	3,160	<0.200	<0.500	<10.0	36.2
	03/17/09	21.2	62.7	0.540	2.96	4.15	5.91	3,750	<0.200	<0.500	<1.00	12.6
	09/21/09	16.2	25.4	<0.40	<2.5	<2.5	<0.50	1,680	<0.20	<2.5	<2.5	<25.0
	03/16/10	18.3	34.8	<0.40	<2.5	<2.5	0.28 <sup>10</sup>	2,600	<0.20	<2.5	<2.5	<25.0
	09/20/10	16.8	22.5 <sup>11</sup>	<0.020	0.51	0.20 <sup>10</sup>	0.057 <sup>10</sup>	1,920 <sup>11</sup>	<0.011	<0.10	2.1 <sup>11</sup>	2.1 <sup>10,11</sup>
	03/21/11	19.3	31.4 <sup>11</sup>	0.048 <sup>10</sup>	0.14 <sup>10</sup>	1.2	0.14	2,740	<0.011	<0.22	<0.070	<2.5
	09/27/11	15.5	27.1	0.041 <sup>10</sup>	0.14 <sup>10</sup>	0.23 <sup>10</sup>	0.13	1,960	0.024 <sup>10</sup>	<0.22	<0.070	<2.5
	03/30/12	17	26	<0.19	<0.84	1.3 J	1.3	1,700	0.0014 J	<0.092	<0.018	<3.1
	09/27/2012	28	54	<1.0	<2.0	<2.0	1	3,600	0.0025	<1.0	<1.0	<1.0
<b>U-18</b>	03/21/07	69.0	491	<1.00	53.9	92	64.2	-	<0.200	1.12	<1.00	213
	09/19/07	95.7	259	<0.800	20.4	40.3	21.9	-	<0.200	<1.60	<0.800	101
	03/25/08	81.0	95.3	<1.00	6.69	10.9	12.8	1,360	<0.200	<2.00	<1.00	45.3
	09/25/08	57.1	91.9	<0.500	8.11	15.8	14.6	2,330	<0.200	<0.500	<1.00	45.3
	03/17/09	83.8	79.9	0.500	3.62	8.71	7.68	594	<0.200	<0.500	<1.00	19.9
	09/22/09	11.0	25.2	<0.080	2.3	<5.0	4.3	429	<0.20	0.30 <sup>5</sup>	<0.50	11.3
	03/16/10	10.6	24.8	<0.40	<2.5	1.2 <sup>10</sup>	<0.50	307	<0.20	<2.5	<2.5	<25.0
	09/21/10	50.1	40.5 <sup>11</sup>	<0.020	0.29 <sup>10</sup>	0.51	0.18	1,850 <sup>11</sup>	<0.011	<0.10	0.096 <sup>10,11</sup>	3.2 <sup>10,11</sup>
	03/21/11	32.2	21.3 <sup>11</sup>	<0.030	0.24 <sup>10</sup>	0.64	0.17	2,040	<0.011	<0.22	<0.070	<2.5
	09/28/11	109	36.9	0.14	0.75	1.3 <sup>11</sup>	0.57	1,530	0.020 <sup>10</sup>	<0.22	<0.070	3.9 <sup>10</sup>
	03/30/12	38	44	0.38 J	5.2	5.3	4	390	0.0084	0.12 J	0.041 J	26
	09/27/2012	83	44	<1.0	7.4	6.4	4.7	1,400	0.010	<1.0	<1.0	13
<b>U-19</b>	03/21/07	76.6	262	<1.00	12.0	22.4	23.2	-	0.201	<1.00	<1.00	139
	09/19/07	96.8	100	<0.800	4.42	10.6	8.99	-	<0.200	<1.60	<0.800	163
	03/25/08	93.4	160	<1.00	6.94	11.9	13.0	4,950	<0.200	<2.00	<1.00	169
	04/02/12	44	64	0.70 J	1.1 J	5.1	1.9	320	0.015	0.18 J	<0.018	23
<b>U-20</b>	03/21/07	50.0	352	<1.00	41.1	45.6	53.4	-	<0.200	1.03	<1.00	157
	09/19/07	28.1	61.9	<0.800	<0.800	<1.60	<0.800	-	<0.200	<1.60	<0.800	4.38
	03/25/08	17.4	61.7	<1.00	<1.00	<2.00	1.08	5,350 <sup>7</sup>	<0.200	<2.00	<1.00	5.22
dup	03/25/08	14.5	57.5	<1.00	<1.00	<2.00	<1.00	5,170 <sup>7</sup>	<0.200	<2.00	<1.00	<5.00
	09/25/08	47.7	910	<1.00	87.5	104	67.1	7,510	<0.200	1.87	<2.00	356
	03/17/09	43.2	84.3	<0.500	3.81	5.64	5.24	3,650	<0.200	<0.500	<1.00	15.2
	09/21/09	69.2	69.3	<0.40	<2.5	<2.5	<0.50	7,360	<0.20	<2.5	<2.5	<25.0
	03/16/10	70.4	67.8	<0.40	<2.5	<2.5	<0.50	8,120	<0.20	<2.5	<2.5	<25.0
	09/21/10 <sup>12</sup>	71.4	65.3 <sup>11</sup>	<0.020	<0.24	<0.20	0.28 <sup>11</sup>	8,400 <sup>11</sup>	<0.011	<0.10	<0.071	2.0 <sup>10,11</sup>
	03/21/11	44.9	59.3 <sup>11</sup>	0.068 <sup>10</sup>	<0.10	0.65	0.16	7,200	<0.011	<0.22	0.81 <sup>10</sup>	<2.5
	09/28/11	76.7	124	0.21	5.8	8.2	7.2	8,240	0.027 <sup>10</sup>	0.32 <sup>10</sup>	<0.070	39.5
	03/29/12	13	59 B	<0.95	2	6.1	2.7	1,100	0.023	0.14 J	0.035 J	45
	09/27/12	72	150	<1.0	11	15	16	8,400	0.011	<1.0	<1.0	50
<b>U-21</b>	03/21/07	8.28	280	<1.00	24.4	30.6	24.1	-	<0.200	<1.00	<1.00	88.6
	09/19/07	6.28	74.8	<0.800	0.954	3.11	4.00	-	<0.200	<1.60	<0.800	9.39
	03/26/08	2.76	83.6	<1.00	1.10	5.18	1.12	1,380 <sup>7</sup>	<0.200	<2.00	<1.00	13.2
	09/25/08	56.2	301	<1.00	37.9	44.1	45.0	6,400	<0.200	<1.00	<2.00	180

**TABLE 4**  
**GROUNDWATER ANALYTICAL RESULTS - TOTAL METALS**  
 Willbridge Terminals  
 Portland, Oregon

	03/17/09	8.13	122	<0.500	7.09	10.0	9.51	4,260	<0.200	<0.500	<1.00	32.4
	09/22/09	7.8	48.8	<0.40	<2.5	<2.5	2.3	6,450	<0.20	<2.5	<2.5	<25.0
	03/16/10	8.0	76.3	<0.40	<2.5	<2.5	1.1	3,910	<0.20	<2.5	<2.5	<25.0
	09/21/10 <sup>12</sup>	55.0	60.4 <sup>11</sup>	0.18	0.28 <sup>10</sup>	0.29 <sup>10,11</sup>	7.9 <sup>11</sup>	14,700 <sup>11</sup>	<0.011	0.13 <sup>10</sup>	<0.071	5.5 <sup>11</sup>
	03/21/11	13.3	43.3	<0.030	<0.10	0.36 <sup>10</sup>	0.65	4,960	<0.011	<0.22	<0.070	2.8 <sup>10</sup>
	09/28/11	17.8	46.9	<0.030	<0.10	0.21 <sup>10,11</sup>	2.0	5,560	0.012 <sup>10</sup>	<0.22	<0.070	<2.5
	03/29/12	15	79 B	<1.9	2.4	5.5	3.5	3,300	0.0094	0.11 J	0.019 J	38
	09/27/12	19	65	<1.0	<2.0	2.9	4	5,300	0.0049	<1.0	<1.0	<1.0

**NOTES:**

Data collected prior to 4Q11 are presented as they were reported by previous consultants

J = result is less than reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value

B = compound was found in the blank sample

\* = Relative Percent Difference of lab control sample and lab control sample duplicate exceed the control limits

µg/L = Micrograms per liter

- = Not analyzed, not applicable

ND = Not detected at laboratory reporting limits

NS/F = Not sampled floating product present

NS/S = Not sampled sheen present

2/00 and 5/00 data from IT Corporation

8/00, 11/00, 2/01 and 5/01 data from KHM Environmental Management, Inc.

dup\* = duplicate for B-30 submitted as blind duplicate labeled as B-50

dup\*\*= duplicate for B-30 submitted as blind duplicate labeled as B-31

dup\*\*\*= duplicate for B-30 submitted as blind duplicate labeled as B-130

<sup>1</sup> = Sample ID was misidentified by the laboratory as D-2

<sup>2</sup> = Sample ID was misidentified by the laboratory as U-2

<sup>3</sup> = The reporting limit for this analyte was raised due to matrix interference.

<sup>4</sup> = The sample container type or preservation does not meet method specifications using EPA Method 1631 modified. The sample was also analyzed for total mercury by EPA Method 7470A. Total mercury was not detected above the laboratory MRL of 0.200 µg/l.

<sup>5</sup> = Estimated value

<sup>6</sup> = The laboratory control sample (LCS) and/or LCS Duplicate recovery was above the acceptance limits.

<sup>7</sup> = Analyte was detected in the associated method blank. Analyte concentration in the sample is greater than 10 times the concentration found in the method blank

<sup>8</sup> = Dissolved Metals per EPA 6000/7000 Series Methods

<sup>9</sup> = Analyte was detected in the associated method blank at a level that is significant relative to the sample result.

<sup>10</sup> = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

<sup>11</sup> = Analyte was detected in the associated method blank

<sup>12</sup> = Samples U-20 and U-21 were identified incorrectly (labels switched) in the field.

<sup>13</sup> = Matrix Spike and/or Matrix Spike Duplicate Recovery exceeds the control limits.

Total metals analysis by EPA 6000/7000 Series Methods

Total mercury analysis by EPA 6000/7000 Series Methods, EPA Method 1631 Modified, or EPA Method 245.1

**TABLE 5**  
**GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA SHALLOW**  
**WELLS - TPH, VOCs, AND METALS**  
 Willbridge Terminals  
 Portland, Oregon

Well Identification	Date Sampled	TPH			VOCs				Metals												
		TPH-G	TPH-D	TPH-O	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Arsenic	Barium	Cadmium	Chromium	Copper	Lead	Manganese	Mercury	Selenium	Silver	Zinc	
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)		
<b>CHEVRON</b>																					
B-10	02/18/00	-	-	-	3.85	4.42	8.78	14.7	-	36.7	-	0.840	35.5	57.2	20.2	-	ND	0.53	0.190	96.5	
dup	02/18/00	-	-	-	3.72	4.1	7.8	13.8	-	39.4	-	1.41	44.8	74.5	27.0	-	ND	5.25	0.200	123	
	05/23/00	-	-	-	3.72	4.1	7.8	13.8	-	35.4	-	ND	26.5	38.4	11.5	-	ND	2.29	ND	63.1	
dup	05/23/00	-	-	-	1.2	2.93	4.14	6.53	-	-	-	-	-	-	-	-	-	-	-		
	08/25/00	-	-	-	1.40	2.80	1.45	4.80	-	31.4	-	ND	1.99	3.66	1.41	-	ND	1.05	ND	177	
	11/30/00	-	-	-	1.20	2.69	ND	4.60	-	30.7	-	ND	5.90	8.00	2.57	-	ND	1.31	ND	16.5	
	02/23/01	-	-	-	3.74	0.983	3.94	6.78	-	-	-	ND	ND	ND	ND	ND	ND	1.84	ND	ND	
	05/17/01	-	-	-	4.87	1.25	4.36	8.56	-	39.5	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	09/19/01	-	-	-	0.711	ND	1.80	2.50	-	23.4	-	ND	24.9	46.6	16.1	-	ND	1.04	ND	79.3	
	03/21/02	-	-	-	3.15	2.60	1.19	2.43	-	30.1	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	09/24/02	-	-	-	1.41	1.43	0.753	2.46	-	29.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	03/20/03	-	-	-	0.680	1.76	ND	2.34	-	32.7	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	09/29/03	-	-	-	2.26	1.60	0.781	4.29	-	33.7	-	ND	2.85	4.41	2.17	-	ND	1.65	ND	13.2	
	03/30/04	-	-	-	<0.500	1.42	<0.500	2.66	-	33.2	-	<1.00	10.0	16.2	7.83	-	<0.200	<1.00	<1.00	40.2	
	10/06/04	-	-	-	0.810	2.62	<0.500	6.55	-	-	-	-	-	-	-	-	-	-	-		
	03/08/05	-	-	-	<1.00	2.00	<1.00	2.89	<1.00	39.5	-	<1.00	2.31	3.59	3.05	-	<0.200	<2.00	<1.00	11.1	
	09/21/05	-	-	-	<1.00	<1.00	<1.00	<3.00	<1.00	36.9	-	<1.00	<1.00	<2.00	<1.00	-	<0.200	<2.00	<1.00	<5.00	
	03/14/06	-	-	-	<1.00	1.08	<1.00	<3.00	<1.00	36.6	-	<1.00	<1.00	<2.00	<1.00	-	<0.200	<2.00	<1.00	<5.00	
	09/26/06	-	-	-	0.970	3.17	0.770	4.09	<2.00	27.4	-	0.08	2.27	<1.60	1.55	-	<5.00	<10.0	<0.096	10.3	
	03/21/07	-	-	-	0.770	1.79	<1.00	6.20	<1.00	28.6	-	0.08	3.39	4.35	2.15	4,290	0.00618	<1.60	<0.096	14.2	
dup	03/21/07	-	-	-	0.720	1.74	<1.00	5.52	<1.00	31.0	-	0.104	4.50	5.81	2.90	3,950	0.00833	<1.60	<0.096	16.9	
	09/18/07	-	-	-	<0.400 <sup>5</sup>	<1.00 <sup>2</sup>	<1.00 <sup>2</sup>	<2.00 <sup>2</sup>	<4.00 <sup>2</sup>	36.0	-	<0.0752	3.16	5.91	1.87	4,660	<0.200	<1.60	<0.097	15.1	
	03/25/08	618	695	<500	0.730	1.35	<0.500	4.30	-	32.4	-	<0.380	<1.00	<2.70	<0.540	3,860	<0.200	<5.00	<120	<33.0	
	09/23/08	792	2,080	<485	1.02	1.14	0.450	2.90	<1.00	32.7	-	<5.00	<20.0	<20.0	<10.0	4,340	0.001170	<5.00	<10.0	11.7	
	03/24/09	743	13,700	<500	1.06	1.46	<1.00	2.15	<1.00	32.2	-	<0.500	<20.0	9.58	3.90	4,570	0.0505	<0.500	<1.00	30.5	
dup	03/24/09	746	25,100	722	0.980	1.31	<1.00	2.02	<1.00	32.2	-	<0.500	<20.0	22.1	7.22	4,670	0.0225	<0.500	<1.00	48.2	
	09/22/09	697	5,660	<500	0.720	1.13	<1.00	2.17	<1.00	31.8	-	<0.500	3.06	<10.0	1.26	4,530	<0.005	<0.500	<1.00	<25.0	
	03/18/10	497	2,150	<495	0.390	1.43	<1.00	<3.00	<1.00	23.0	-	<1.00	<2.00	<1.00	4,330	<0.005	<1.00	<1.00	<10.0		
	09/21/10	954	9,200	<472	0.490	<1.00	<1.00	<3.00	<1.00	39.9	-	<1.00	10.6	14.8	<10.0	4,560	0.0327	<1.00	<1.00	37.0	
	03/23/11	767	1,870	<490	0.330	1.15	<1.00	<3.00	<1.00	32.4	-	<1.00	<2.00	<2.00	<1.00	5,100	<0.005	<1.00	<1.00	<10.0	
	10/03/11	739	2,150	<500	0.440	2.90	<2.00	<6.00	<2.00	26.6	-	<1.00	<2.00	<2.00	<1.00	4,230	<0.005	<1.00	<1.00	<10.0	
	04/05/12	670	1,600 *	76 J *	0.35 J	0.95 J	0.18 J	2.2 J	<0.090	27	-	<0.19	1.8 J	3.3	0.97 J B	3,900	0.00077 J	0.12 J B	<0.018	10	
	10/01/12	690	7,900	670	<1.0	<1.0	<1.0	<3.0	<1.0	52	-	<10	<20	2.2	<10	4,200	0.34	<1.0	<1.0	24	
4/1/2013	920	6,700	<550	<1.0	<1.0	<1.0	<3.0	<1.0	48	-	<1.0	2	2.1	1.1	3,700	0.00051	<1.0	<1.0	19		
9/16/2013	760	1,500	<260	0.2	0.62	<0.5	1.2	<1	41	-	<1.0	2	<2	<1.0	3,900	0.0023	<1.0	<1.0	<10		
dup	9/16/2013	690	-	-	<0.2	<0.5	<0.5	1.3	<1.0	42	-	<1.0	<2.0	<2.0	<1.0	4,100	0.0054	<1.0	<1.0	13	
	3/17/2014	740	3,300	380	0.26	0.57	<0.50	1.2	<1.0	<1.0	-	<1.0	5.0	6.1	2.3	3,500	0.0066	<1.0	<1.0	26	
dup	3/17/2014	830	6,100	560	0.27	0.55	<0.50	1.3	<1.0	42	-	<1.0	5.0	5.5	2.5	3,500	0.0072	<1.0	<1.0	24	
	9/10/2014	510	9,400	620	<0.20	<0.50	<0.50	1	<1.0	38	-	<1.0	4.1	4	1.5	3,600	0.0071	<1.0	<1.0	17	
dup	9/10/2014	560	3,000	<270	<0.20	<0.50	<0.50	<1.0	<1.0	38	-	<1.0	4.0	3.8	1.4	3,600	0.0070	<1.0	<1.0	17	
	3/18/2015	570	37,000	<5100	<2.0	<2.0	<3.0	<5.0	<1.0	37	-	<2.0	22	24	7.3	4,200	0.016	<5.0	<2.0	71	
	3/18/2015	660	13,000	<2800	<2.0	<2.0	<3.0	<5.0	<1.0	36	-	<2.0	26	29	8.6	4,600	0.012	<5.0	<2.0	73	
	9/9/2015	660	4,600	1,300	<2.0	<2.0	<3.0	<5.0	<1.0	40	92	<4	4.2	<20	<4	4,000	0.0033	<10	<4	<70	
B-21	09/19/01	-	-	-	ND	ND	1.47	ND	-	30.6	-	ND	8.33	10.7	3.22	-	ND	ND	ND	25.9	
	03/21/02	-	-	-	ND	0.679	ND	ND	-	40.5	-	ND	ND	ND	ND	ND	ND	ND	ND	1.09	8.52
	09/24/02	-	-	-	ND	1.20	0.517	1.20	-	41.2	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	03/20/03	-	-	-	ND	ND	ND	ND	-	74.0	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	09/29/03	-	-	-	0.659	1.3	<0.500	2.20	-	47.4	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	
	03/29/04	-	-	-	<0.500	0.720	<0.500	<1.00	-	46.9	-	<1.00	9.84	14.1	4.78	-	<2.00	<1.00	<1.00	34	
	10/06/04	-	-	-	<0.500	<0.880	<0.500	<1.00	-	-	-	-	-	-	-	-	-	-	-		
	03/08/05	-	-	-	<1.00	<1.00	<1.00	<2.00	17.4	55.9	-	<1.00	14.3	18.8	5.35	-	<0.200	<2.00	<1.00	37.4	
	09/22/05	-	-	-	<1.00	1.15	<1.00	<3.00	11.2	55.4	-	<1.00	<1.00	<2.00	<1.00	-	<0.200	<2.00	<1.00	<5.00	
	03/15/06	-	-	-	<1.00	<1.00	<1.00	<3.00	1.30	53.1	-	<1.00	1.02	<2.00	<1.00	-	<0.200	<2.00	<1.00	<5.00	
	09/26/06	-	-	-	0.460	0.980	<0.500	1.01	<2.00	43.2	-	<1.00	<1.00	<1.00	<1.00	-	<0.200	<1.00	<1.00	<10.0	
	03/21/07	-	-	-	0.400	1.64	<1.00	<2.00	1.20	39.0	-	0.088	2.13	3.62	2.62	2,760	0.0144	<1.60	<0.0960	13.6	
	09/19/07	-	-	-	0.330	1.78	<0.500	1.03	<2.00	43.0	-	<0.800	8.80	10.8	3.78	2,740					

**TABLE 5**  
**GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA SHALLOW  
 WELLS - TPH, VOCs, AND METALS**  
 Willbridge Terminals  
 Portland, Oregon

10/01/12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
03/29/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
09/16/13	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
03/17/14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
09/09/14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
CR-1	09/20/01	-	-	-	ND	ND	ND	ND	-	14.3	-	ND	2.03	4.68	2.83	-	ND	1.18	ND	8.46	
	03/21/02	-	-	-	ND	ND	ND	ND	-	1.73	-	ND	1.13	3.97	ND	-	ND	ND	ND	16.3	
	09/24/02	-	-	-	ND	ND	ND	ND	-	2.04	-	ND	ND	ND	ND	-	ND	ND	ND	6.09	
	03/20/03	-	-	-	ND	ND	ND	ND	-	11.9	-	ND	1.56	11.2	2.11	-	ND	ND	ND	17.9	
	09/29/03	-	-	-	<0.500	<0.500	<0.500	<0.500	<1.00	-	8.32	-	ND	2.49	8.36	3.91	-	ND	1.89	ND	13.9
	03/30/04	-	-	-	25.8	1.13	120	9.06	-	2.10	-	5.83	22.0	53.5	67.6	-	<0.200	<1.00	<1.00	212	
	10/06/04	-	-	-	<0.500	<0.500	<0.500	<0.500	<1.00	-	-	-	-	-	-	-	-	-	-		
	03/08/05	-	-	-	<1.00	<1.00	<1.00	<1.00	<2.00	1.67	-	<1.00	<1.00	2.62	<1.00	-	<0.200	<2.00	<1.00	10.2	
	09/21/05	-	-	-	<1.00	<1.00	<1.00	<1.00	<3.00	3.25	-	<1.00	<1.00	2.31	<1.00	-	<0.200	<2.00	<1.00	<5.00	
	09/27/06	-	-	-	<0.200	<0.500	<0.500	<0.500	<1.00	1.94	-	0.144	<0.800	2.77	0.44	-	<5.00	<2.00	<0.0960	10.9	
dup	03/22/07	-	-	-	<0.200	<1.00	<1.00	<1.00	<2.00	0.912	-	<0.0752	<0.800	3.92	<0.432	185	<0.005	<1.60	<0.800	9.6	
	09/20/07	-	-	-	<0.200	<0.500	<0.500	<0.500	<1.00	1.41	-	<0.800	<0.800	<1.60	<0.800	862	<0.200	<1.60	<0.800	<4.00	
	03/25/08	<80.0	<245	<490	<0.200	<0.500	<0.500	<0.500	<1.00	0.51	-	<0.380	<1.00	3.40	<0.540	76.1	<0.200	<5.00	<0.120	<33.0	
	#REF!	154	376	<485	<0.400	<2.00	<2.00	<6.00	<2.00	3.47	-	<0.500	1.17	3.97	1.19	595	0.00198	<0.500	<1.00	13.3	
	03/25/09	<80.0	<248	<495	<0.200	<1.00	<1.00	<3.00	<1.00	<1.00	-	<0.500	<2.00	<2.00	<1.00	127	<0.005	<0.500	<1.00	7.68	
	09/22/09	<80.0	523	<500	<0.200	<1.00	<1.00	<3.00	<1.00	1.24	-	<0.500	<2.00	68.2	<1.00	560	<0.005	<0.500	<1.00	74.8	
	03/19/10	87.4	<245	<490	<0.200	<1.00	<1.00	<3.00	<1.00	<1.00	-	<0.500	<2.00	<1.00	<1.00	113	<0.005	<1.00	<1.00	<10.0	
	03/19/10	150	<245	<490	<0.200	<1.00	<1.00	<3.00	<1.00	<1.00	-	<1.00	<2.00	<1.00	<1.00	146	<0.005	<1.00	<1.00	<10.0	
	09/22/10	122	7,320	580	<0.200	<1.00	<1.00	<3.00	<1.00	-	-	-	-	-	-	-	-	-	-		
	03/24/11	<80.0	115	<472	<0.200	<1.00	<1.00	<3.00	<1.00	<1.00	-	<1.00	<2.00	3.19	<1.00	197	<0.005	<1.00	<1.00	<10.0	
dup	10/05/11	<80.0	220	<485	<0.200	<1.00	<1.00	<3.00	<1.00	1.20	-	<1.00	<2.00	2.48	<1.00	375	<0.005	<1.00	<1.00	<10.0	
	04/05/12	89	31,000 *	1,700 *	<0.060	<0.090	<0.080	<0.31	<0.090	0.43 J	-	<0.19	<0.84	2.8	0.20 J B	91	0.0038 J	<0.092	<0.018	7.4 J	
	10/01/12	<80	1,600	760	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	-	<1.0	<2.0	4.8	<1.0	200	0.0038	<1.0	<1.0	11	
	03/29/13	<80	920	<520	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	-	<1.0	<2.0	8.9	<1.0	180	0.0095	<1.0	<1.0	<10	
	03/29/13	<80	790	<490	<1.0	<1.0	<1.0	<3.0	<1.0	<1.0	-	<1.0	<2.0	5.9	<1.0	180	0.0011	<1.0	<1.0	<10	
	09/16/13	<80	<110	<270	<0.2	<0.5	<0.5	<1.0	<1.0	<1.0	-	<1.0	<2.0	4.3	<1.0	170	0.0039	<1.0	<1.0	16	
	03/17/14	<50	800	330	<0.20	<0.50	<0.50	<1.0	<1.0	<1.0	-	<1.0	<2.0	2.5	<1.0	91	0.0060	<1.0	<1.0	10	
	09/09/14	<50	910	390	<0.20	<0.50	<0.50	<1.0	<1.0	<1.0	-	<1.0	<2.0	4.5	<1.0	150	0.0057	<1.0	<1.0	11	
	03/09/15	<100	990	1,900	<2.0	<2.0	<3.0	<5.0	<1.0	<5.0	-	<2.0	<2.0	<10	<2.0	170	0.0053	<5.0	<2.0	<35	
	03/09/15	<100	970	1,800	<2.0	<2.0	<3.0	<5.0	<1.0	<5.0	-	<2.0	<2.0	<10	<2.0	160	0.0048	<5.0	<2.0	<35	
KINDER MORGAN	09/11/15	<50	620	730	<2.0	<2.0	<3.0	<5.0	<1.0	<5.0	<5	14	<2	<2	<10	<2	180	0.0055	<5	<2	<35
	MW-33	02/16/00	-	-	-	ND	0.718	0.589	1.21	-	8.42	-	0.060	1.62	4.23	3.68	-	ND	ND	ND	7.46
dup	05/30/00	-	-	-	ND	ND	ND	ND	-	6.55	-	ND	1.79	3.38	1.54	-	ND	ND	ND	7.21	
	08/24/00	-	-	-	ND	ND	ND	ND	-	10.3	-	ND	1.04	2.46	ND	-	ND	2.59	ND	ND	
	11/30/00	-	-	-	ND	ND	ND	ND	-	58.0	-	ND	2.23	3.43	ND	-	ND	1.63	ND	8.82	
	02/22/01	-	-	-	ND	ND	ND	ND	-	14.2	-	ND	1.79	3.39	1.03	-	ND	ND	ND	9.44	
	02/22/01	-	-	-	ND	ND	ND	ND	-	14.2	-	ND	1.88	3.90	1.55	-	ND	ND	ND	11	
	05/16/01	-	-	-	ND	ND	ND	ND	-	17.8	-	ND	ND	1.28	ND	-	ND	ND	ND	ND	
	09/21/01	-	-	-	ND	ND	ND	ND	-	10.0	-	ND	ND	ND	ND	-	ND	1.51	ND	ND	
	03/14/02	-	-	-	ND	ND	ND	ND	-	9.75	-	ND	ND	ND	ND	-	ND	2.02	ND	ND	
	09/27/02	-	-	-	ND	ND	ND	ND	-	30.2	-	ND	2.06	3.03	1.36	-	ND	ND	ND	20.5	
	03/18/03	-	-	-	ND	ND	ND	ND	-	8.67	-	ND	ND	NS	ND	-	ND	ND	1.40	NS	
dup	09/24/03	-	-	-	<0.500	<0.500	<0.500	<0.500	<1.00	-	23.2	-	ND	ND	ND	ND	-	ND	ND	ND	
	03/29/04	-	-	-	<0.500	<0.500	<0.500	<0.500	<1.00	-	12.4	-	<1.00	1.14	<2.00	<1.00	-	<0.200	<1.00	<5.00	
	09/27/04	-	-	-	<0.500	<0.500	<0.500	<0.500	<1.00	-	132	-	<2.00	6.28	13.5	<2.00	-	0.490	<2.00	<2.00	
	03/29/05	-	-	-	<0.200	<0.500	<0.500	<0.500	<1.00	-	7.57	-	<1.00	0.360	2.44	0.210	-	<0.200	<1.00	<1.00	
	09/21/05	-	-	-	<0.200	<0.500	<0.500	<0.500	<1.00	-	18.1	-	<1.00	1.65	2.90	<1.00	-	<0.200	<2.00	5.80	
	09/21/05	-	-	-	<0.200	<0.500	<0.500	<0.500	<1.00	-	16.3	-	<1.00	1.51	2.92	<1.00	-	<0.200	<2.00	5.16	
	03/15/06	-	-	-	<0.500	<0.500	<0.500	<0.500	<1.00	-	11.2	-	<1.00	<1.00	<2.00	<1.00	-	<0.200	<2.00	6.00	
	09/27/06	-	-	-	<0.200	<0.500	<0.500	<0.500	<1.00	-	26.3	-	<0.0752	<0.800	<1.60	<0.432	-	7.24	<1.60	<0.0960	
	03/22/07	-	-	-	<0.200	<0.500	<0.500	<0.500	<1.00	-	13.9	-	0.205	<0.800	<1.60	<0.432	-	0.00767	<1.60	<0.0960	
	03/22/07	-	-	-	<0.200	<0.500	<0.500	<0.500	<1.00	-	37.3	-	0.952	1.10	2.42	<0.432	-	<0.00500	<1.60	<0.0960	
dup	09/18/07	-	-	-	<0.400	<0.400	<0.400	<0.400	<2.00	-	32.9	-	<1.00	1.33	2.73	<1.00	-	0.0166	<2.00	<1.00	
	03/25/08	<13	<13	42	<0.14	<0.11	<0.13	<0.33	<0.20	-	12.1	-	0.047	0.58	1.41	0.478	1,100	0.0235	<0.2	0.009	3.14
	09/23/08	<250	14	34	<0.50	<0.50	<0.50	<0.50	<1.00	-	32.0	-	0.135	1.31	3.28	0.764	1,780	0.167	0.4	0.029	8.11
	03/16/09	-	-	-	<0.200	<1.00	<1.00	<3.00	<1.00	-	12.7	-	<0.500	<2.00	<2.00	<1.00	-	0.0126	<0.500	<1.00	<5.00
	09/14/09	-	-	-	<0.500	<0.500	<0.500	<0.500	<1.00	-	14.1	-	<0.500	<2.00	2.92	1.43	-	0.0137	<0.500	<1.00	7.84
	03/16/10	-	-	-	<0.200	<1.00	<1.00	<3.00	<1.00	-	12.1	-	<1.00	<4.00	1.32	1.210	-	0.00496	<1.00	<1.00	<20.0
	09/20/10	-	-	-	<0.200	<1.00	<1.00	<3.00	<1.00	-	20.3	-	<2.00	<2.00	2.51	1.11	1,470	0.0301	<2.00	<1.00	<10.0
	03/21/11	-	-	-	<0.50	<0.50	<0.50	<0.50	<1.00	-	6.5	-	<0.50	<10	<10	<1.00	730	0.00727	<5.0	<1.00	<50
	09/27/11	-	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	-	<5.0	-</td									

**TABLE 5**  
**GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA SHALLOW**  
**WELLS – TPH, VOCs, AND METALS**  
 Willbridge Terminals  
 Portland, Oregon

MW-34	09/21/01	-	-	-	ND	ND	ND	ND	-	69.7	-	2.39	14.3	144	14.6	-	ND	1.46	ND	104
	03/14/02	-	-	-	ND	ND	ND	ND	-	37.6	-	ND	5.82	13.2	5.49	-	ND	ND	1.51	32.1
	09/27/02	-	-	-	ND	ND	ND	ND	-	162	-	1.64	26.4	67.6	22.6	-	ND	1.3	ND	126
	03/18/03	-	-	-	ND	ND	ND	ND	-	14.8	-	ND	6.02	NS	5.41	-	ND	ND	1.13	NS
	09/24/03	-	-	-	<0.500	<0.500	<0.500	<1.00	-	10.9	-	ND	1.06	2.36	1.17	-	ND	ND	ND	9.94
	03/29/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	3.64	-	<1.00	1.14	<2.00	<1.00	-	<0.200	<1.00	<1.00	<5.00
	09/27/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	87.9	-	<1.00	11.4	28.5	11.1	-	<0.200	1.31	<1.00	54.7
	03/29/05	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	12.6	-	<1.00	0.530	4.75	1.58	-	<0.200	0.350	<1.00	12.7
dup	03/29/05	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	12.5	-	<1.00	0.460	3.82	1.48	-	<0.200	0.430	<1.00	11.9
	09/21/05	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	53.7	-	<1.00	1.05	3.54	1.13	-	<0.200	<2.00	<1.00	7.54
dup	09/21/05	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	03/15/06	-	-	-	<0.500	<0.500	<0.500	<1.00	-	5.90	-	<1.00	3.08	3.29	2.46	-	<0.200	<2.00	<1.00	13.2
	09/27/06	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	14.3	-	0.103	0.899	3.18	1.39	-	<0.005	<1.60	<0.0960	15.0
dup	09/27/06	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-	-	-	-	-	-	-	-	-	-	-
	03/22/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	25.2	-	0.176	4.01	9.22	5.01	-	0.00877	<1.60	<0.0960	32.9
	09/18/07	-	-	-	<0.400	<0.400	<0.400	<2.00	<1.00	32.5	-	<1.00	3.14	8.00	3.51	-	0.0208	<2.00	<1.00	20.2
	03/25/08	20	12	44	<0.14	0.17	<0.13	<0.33	<0.20	4.33	-	0.203	1.27	2.25	1.61	-	0.098	<0.2	0.008	5.69
	06/24/08	<250	19	36	<0.045	<0.048	<0.042	<0.115	<0.070	8.70	-	0.108	1.87	4.37	2.95	1,800	0.00789	0.3	0.016	13.6
	09/23/08	150	53	140	<0.50	<0.50	<0.50	0.080	0.18	27.3	-	0.578	7.36	26.5	13.2	5,040	0.00776	0.4	0.075	49.7
	01/05/09	<80	<238	<476	<0.200	<1.00	<1.00	<1.00	<1.00	4.81	-	<0.500	<2.00	2.36	1.10	160	0.00422	<0.500	<1.00	5.59
	03/16/09	-	-	-	<0.200	<1.00	<1.00	<3.00	<1.00	11.0	-	<0.500	6.68	12.7	8.64	-	0.0388	<0.500	<1.00	28.4
	09/14/09	-	-	-	<0.500	<0.500	<0.500	<1.00	-	26.8	-	3.22	18.3	52.7	20.4	-	0.0543	<0.500	<1.00	73.2
	03/16/10	-	-	-	<0.200	<1.00	<1.00	<3.00	<1.00	38.8	-	<1.00	46.5	56.6	51.7	1,860	0.00209	<2.00	<1.00	157
	09/20/10	-	-	-	<0.200	<1.00	<1.00	<3.00	<1.00	4.90	-	<2.00	<2.00	<2.00	<1.00	1,250	0.00590	<2.00	<1.00	<10.0
	03/21/11	-	-	-	<0.50	<0.50	<0.50	<1.5	<0.50	3.0	-	<0.50	0.80	2.6	1.8	110	0.00232	<1.0	<1.00	8.8
	09/27/11	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	-	<5.0	-	<5.0	<5.0	<10	<5.0	720	<1.0	<5.0	<5.00	<100
	03/26/12	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	-	<5.0	-	<5.0	10	<10	<5.0	37	0.00175	<5.0	<5.00	<100
	09/24/12	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	-	6	-	<2.0	13	<20	<5.0	910	0.00129	<5.0	<5.0	<100
	03/25/13	<250	<250	<500	<0.5	<0.5	<0.5	<0.5	-	<5.0	-	<2.0	<10	<20	<5.0	16	0.00083	<5.0	<5.0	<100
	09/09/13	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	-	<2.0	<10	<20	<5.0	100	0.0316	<5.0	<5.0	<100
	03/03/14	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	-	<2.0	<10	<20	<5.0	23	0.0006	<5.0	<5.0	<100
	08/26/14	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	-	<2.0	12	<20	<5.0	150	0.00096	<5.0	<5.0	<100
	03/03/15	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	-	<2.0	41	<20	<5.0	57	0.00101	<5.0	<5.0	<100
	08/19/15	<31.6	237	116 J	<0.0896	<0.102	<0.158	<0.316	<0.102	1.79 J	34.4	<0.160	<0.540	1.96 J	<0.240	222	<0.0490	<0.380	<0.310	<2.56
MW-36	02/16/00	-	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	14.6	-	0.050	4.13	6.14	3.55	-	ND	0.22	ND	13.1
	05/31/00	-	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	14.9	-	ND	1.80	3.08	ND	-	ND	ND	ND	ND
	08/24/00	-	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	18.7	-	ND	ND	2.22	ND	-	ND	1.11	ND	10.8
	11/30/00	-	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	22.5	-	ND	ND	ND	ND	-	ND	1.47	ND	ND
	02/21/01	-	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	20.1	-	ND	1.51	2.80	ND	-	ND	ND	ND	6.77
	05/16/01	-	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	29.7	-	ND	ND	16.9	ND	-	ND	ND	ND	14.9
	09/21/01	-	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	16.8	-	ND	ND	ND	ND	-	ND	1.08	ND	ND
	03/13/02	-	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	4.42	-	ND	ND	2.97	ND	-	ND	ND	ND	12.2
	03/18/03	-	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	5.41	-	ND	1.22	NS	ND	-	ND	ND	ND	NS
	09/24/03	-	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	43.6	-	ND	1.03	2.34	ND	-	ND	ND	ND	ND
	03/29/04	-	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	10.8	-	<1.00	1.31	3.85	1.44	-	<0.200	<1.00	<1.00	<5.00
	09/27/04	-	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	32.0	-	<1.00	2.38	7.39	3.34	-	<0.200	1.40	<1.00	6.75
	09/21/05	-	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	33.6	-	<1.00	<1.00	3.07	<1.00	-	<0.200	<2.00	<1.00	<5.00
	03/15/06	-	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	5.90	-	<1.00	<1.00	3.84	<1.00	-	<0.200	<2.00	<1.00	<5.00
	09/27/06	-	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	17.6	-	<0.752	<0.800	1.70	<0.432	-	<0.0500	<1.60	<0.0960	4.50
dup	09/27/06	-	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	15.7	-	<0.752	<0.800	1.60	<0.432	-	<0.0500	<1.60	<0.0960	<4.00
	03/22/07	-	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	8.6	-	<0.752	<0.800	2.64	0.652	-	0.00540	<1.60	<0.0960	6.28
	09/18/07	-	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	18.9	-	<1.00	<1.00	<2.00	<1.00	-	<0.0500	<2.00	<1.00	<5.00
dup	09/18/07	-	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	30.4	-	<1.00	<1.00	4.49	1.07	-	<0.0500	<2.00	<1.00	9.78
	03/25/08	<13	<12	40	<0.50	<0.50	<0.50	<0.50	<0.50	8.28	-	0.032	0.64	3.85	0.702	-	0.0071	<0.2	0.005	5.45
	09/23/08	120	20	<500	<0.50	<0.50	<0.50	<0.50	<0.50	21.6	-	0.018	0.67	2.46	0.652	3,570	0.00443	0.8	0.018	2.80
	03/16/09	-	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	24.2	-	<0.500	<2.00	3.56	2.70	-	0.00608	<0.500	<1.00	5.42
	09/14/09	-	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	29.3	-	<0.500	<2.00	3.02	1.75	-	0.00790	<0.500	<1.00	<5.00
dup	09/14/09	-	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	30.8	-	<0.500	<2.00	2.85	1.67	-	0.00411	<0.500	<1.00	<5.00
	03/16/10	-	-	-	<0.50	<0.50	<0.50	<0.50	<0.50	9.94	-</td									

**TABLE 5**  
**GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA SHALLOW**  
**WELLS – TPH, VOCs, AND METALS**  
 Willbridge Terminals  
 Portland, Oregon

	02/21/01	-	-	-	<0.50	<0.50	<0.50	<0.50	22.3	-	ND	1.53	2.06	ND	-	ND	ND	ND	ND	5.26
	05/16/01	-	-	-	<0.50	<0.50	<0.50	<0.50	20.9	-	ND	ND	ND	-	ND	ND	ND	ND	ND	ND
	09/21/01	-	-	-	<0.50	<0.50	<0.50	<0.50	22.2	-	ND	1.27	ND	1.47	-	ND	ND	ND	ND	ND
	09/27/02	-	-	-	<0.50	<0.50	<0.50	<0.50	19.0	-	ND	ND	ND	-	ND	ND	ND	ND	ND	ND
dup	09/27/02	-	-	-	<0.50	<0.50	<0.50	<0.50	19.4	-	ND	ND	ND	-	ND	ND	ND	ND	ND	9.23
	03/18/03	-	-	-	<0.50	<0.50	<0.50	<0.50	8.64	-	ND	ND	NS	ND	-	ND	ND	ND	ND	1.41
	09/24/03	NS	NS	NS	<0.50	<0.50	<0.50	<0.50	NS	-	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	09/27/04	-	-	-	<0.50	<0.50	<0.50	<0.50	24.2	-	<1.00	3.08	5.65	3.34	-	<0.200	<1.00	<1.00	<1.00	18.1
	03/29/05	-	-	-	<0.50	<0.50	<0.50	<0.50	15.3	-	<1.00	0.230	<1.00	0.580	-	<0.200	<1.00	<1.00	<1.00	4.49
	09/21/05	-	-	-	<0.50	<0.50	<0.50	<0.50	19.4	-	<1.00	<1.00	<2.00	1.44	-	<0.200	<2.00	<1.00	<5.00	
	03/15/06	-	-	-	<0.50	<0.50	<0.50	<0.50	12.0	-	<1.00	<1.00	<2.00	1.41	-	<0.200	<2.00	<1.00	<1.00	9.59
	09/27/06	-	-	-	<0.50	<0.50	<0.50	<0.50	19.9	-	<0.0752	<0.800	<1.60	<0.432	-	<0.005	<1.60	<0.0960	<4.00	
	03/22/07	-	-	-	<0.50	<0.50	<0.50	<0.50	21.0	-	0.173	<0.800	<1.60	0.81	-	<0.005	<1.60	<0.0960	<8.43	
	09/18/07	-	-	-	<0.50	<0.50	<0.50	<0.50	23.6	-	<1.00	<1.00	<2.00	3.08	-	<0.005	<2.00	<1.00	<1.00	8.03
	03/25/08	480	12,000	480	<0.50	<0.50	<0.50	<0.50	22.1	-	0.617	1.26	2.77	1.91	-	0.0034	<0.2	0.016	<0.2	11.4
dup	03/25/08	670	3,500	130	<0.50	<0.50	<0.50	<0.50	24.9	-	1.01	1.55	2.99	2.52	-	0.0078	<0.2	0.019	<0.2	10.9
	06/23/08	400	370	33	<0.50	<0.50	<0.50	<0.50	18.0	-	0.084	0.380	0.390	0.39	2,490	0.00064	<0.29	0.004	<0.29	2.60
	09/23/08	670	3,500	69	<0.50	<0.50	<0.50	<0.50	18.7	-	0.270	0.37	0.89	1.29	2,530	0.00223	0.4	0.019	0.019	4.47
dup	09/23/08	550	3,700	63	<0.50	<0.50	<0.50	<0.50	19.0	-	0.198	0.29	0.77	1.16	2,560	0.00197	0.4	0.009	0.009	4.92
	01/05/09	128	3,780	<490	<0.50	<0.50	<0.50	<0.50	19.0	-	0.673	<2.00	<2.00	1.80	1,730	0.00267	<0.500	<1.00	<1.00	14.8
	03/16/09	-	-	-	<0.50	<0.50	<0.50	<0.50	19.8	-	<0.500	<2.00	<2.00	3.52	-	0.00114	<0.500	<1.00	<1.00	<5.00
	09/14/09	-	-	-	<0.50	<0.50	<0.50	<0.50	16.2	-	<0.500	<2.00	<2.00	<1.00	-	0.000946	<0.500	<1.00	<1.00	<5.00
	03/16/10	-	-	-	<0.50	<0.50	<0.50	<0.50	9.77	-	<1.00	<2.00	2.06	8.98	1,310	0.0131	<1.00	<1.00	<1.00	<10.0
dup	03/16/10	-	-	-	<0.50	<0.50	<0.50	<0.50	9.42	-	<1.00	<2.00	7.52	1,380	0.00794	<1.00	<1.00	<1.00	<10.0	
	09/20/10	-	-	-	<0.50	<0.50	<0.50	<0.50	15.7	-	<1.00	<2.00	3.11	2,070	0.00171	<10.0	<1.00	<1.00	<10.0	
dup	09/20/10	-	-	-	<0.50	<0.50	<0.50	<0.50	16.0	-	<1.00	<2.00	2.56	2,090	0.00266	<10.0	<1.00	<1.00	<10.0	
	03/21/11	-	-	-	<0.50	<0.50	<0.50	<0.50	4.0	-	<0.50	<2.0	1.7	960	0.00352	<1.0	<1.00	<1.00	9.2 <sup>10</sup>	
dup	03/21/11	-	-	-	<0.50	<0.50	<0.50	<0.50	2.3	-	<0.50	<2.0	<2.0	1.3	910	0.00274	<1.0	<1.00	<1.00	5.8 <sup>10</sup>
	09/27/11	<250	2,400	<500	<0.50	<0.50	<0.50	<0.50	19	-	<5.0	<5.0	<10	<5.0	2,600	<1.0	<5.0	<5.00	<100	
dup	09/27/11	<250	670	<500	<0.50	<0.50	<0.50	<0.50	19	-	<5.0	<5.0	<10	<5.0	2,500	<1.0	<5.0	<5.00	<100	
	03/26/12	<250	610	<500	<0.50	<0.50	<0.50	<0.50	<5.0	-	<5.0	10	<10	7.5	230	0.000790	<5.0	<5.00	<100	
dup	03/26/12	<250	410	<500	<0.50	<0.50	<0.50	<0.50	<5.0	-	<5.0	12	<10	<5.0	210	0.000800	<5.0	<5.00	<100	
	09/24/12	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	18	-	<2.0	<10.0	<20.0	<5.0	1,800	0.001140	<5.0	<5.00	<100	
dup	09/24/12	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	18	-	<2.0	<10.0	<20.0	<5.0	1,800	0.001180	<5.0	<5.00	<100	
	03/25/13	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	9.2	-	<2.0	<10	<20	<5.0	1,600	0.00047	<5.0	<5.00	<100	
dup	03/25/13	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	<5.0	-	<2.0	<10	<20	<5.0	540	0.00046	<5.0	<5.00	<100	
	09/09/13	<250	390	<500	<0.50	<0.50	<0.50	<0.50	14	-	<2.0	<10	<20	<5.0	2,100	0.00077	<5.0	<5.00	<100	
dup	09/09/13	<250	440	<500	<0.50	<0.50	<0.50	<0.50	14	-	<2.0	75	<20	<5.0	2,100	0.00071	<5.0	<5.00	<100	
	03/03/14	<250	450	<500	<0.50	<0.50	<0.50	<0.50	8.3	-	<2.0	<10	<20	<5.0	2,100	0.00056	<5.0	<5.00	<100	
dup	08/26/14	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	19	-	<2.0	<10	<20	<5.0	1,400	0.00093	<5.0	<5.00	<100	
	08/26/14	<250	260	<500	<0.50	<0.50	<0.50	<0.50	18	-	<2.0	<10	<20	<5.0	1,400	0.00076	<5.0	<5.00	<100	
dup	03/03/15	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	<5.0	-	<2.0	<10	<20	<5.0	80	0.00086	<5.0	<5.00	<100	
	03/03/15	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	<5.0	-	<2.0	<10	<20	<5.0	81	0.00077	<5.0	<5.00	<100	
	08/19/15	<31.6	758	91.9 J	<0.0896	<0.102	<0.158	<0.316	15.6	30.3	<0.160	<0.540	0.933 J	0.667 J	1,980 O1 V	<0.0490	<0.380	<0.310	<2.56	
MW-40	02/16/00	-	-	-	<0.50	<0.50	<0.50	<0.50	22.1	-	0.110	20.2	28.9	25.4	-	ND	0.47	0.12	66.9	
	05/30/00	-	-	-	<0.50	<0.50	<0.50	<0.50	25.0	-	ND	7.83	10.7	8.37	-	ND	ND	ND	24.5	
dup	08/24/00	-	-	-	<0.50	<0.50	<0.50	<0.50	27.0	-	ND	1.62	3.16	1.41	-	ND	ND	3.85	ND	
	11/30/00	-	-	-	<0.50	<0.50	<0.50	<0.50	31.9	-	ND	4.33	7.34	4.91	-	ND	1.87	ND	ND	
dup	02/21/01	-	-	-	<0.50	<0.50	<0.50	<0.50	38.7	-	ND	3.75	6.07	3.30	-	ND	ND	ND	ND	
	05/16/01	-	-	-	<0.50	<0.50	<0.50	<0.50	23.9	-	ND	2.24	3.14	1.93	-	ND	ND	ND	8.62	
dup	09/21/01	-	-	-	<0.50	<0.50	<0.50	<0.50	24.8	-	ND	3.06	3.43	2.54	-	ND	2.32	ND	ND	
	03/13/02	-	-	-	<0.50	<0.50	<0.50	<0.50	12.6	-	ND	1.97	3.36	1.94	-	ND	ND	ND	12.4	
dup	09/27/02	-	-	-	<0.50	<0.50	<0.50	<0.50	28.1	-	ND	8.81	10.4	8.08	-	ND	ND	ND	25.0	
	03/18/03	-	-	-	<0.50	<0.50	<0.50	<0.50	17.4	-	ND	1.35	NS	1.30	-	ND	ND	ND	NS	
dup	09/24/03	-	-	-	<0.50	<0.50	<0.50	<0.50	44.8	-	ND	8.95	13.1	31.6	-	ND	ND	ND	32.6	
	09/24/03	-	-	-	<0.50	<0.50	<0.50	<0.50	67.8	-	ND	17.9	24.9	53.8	-	ND	ND	ND	62.7	
dup	03/29/04	-	-	-	<0.50	<0.50	<0.50	<0.50	19.0	-	<1.00	1.24	2.64	1.24	-	<0.200	<2.00	<1.00	<5.00	
	03/29/04	-	-	-	<0.50	<0.50	<0.50	<0.50	17											

**TABLE 5**  
**GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA SHALLOW**  
**WELLS – TPH, VOCs, AND METALS**  
 Willbridge Terminals  
 Portland, Oregon

	03/25/13	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	-	<2.0	<10	<20	<5.0	<b>510</b>	<b>0.00066</b>	<5.0	<5.0	<100
	09/09/13	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	<0.50	<b>27</b>	-	<2.0	<10	<20	<5.0	<b>3,700</b>	<b>0.0005</b>	<5.0	<5.0	<100
	03/03/14	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	<0.50	<5.0	-	<2.0	<10	<20	<5.0	<b>390</b>	<b>0.00046</b>	<5.0	<5.0	<100
	08/26/14	<250	<250	<500	<0.50	<0.50	<0.50	<0.50	<0.50	<b>25</b>	-	<2.0	<10	<20	<5.0	<b>3,300</b>	<1.0	<5.0	<5.0	<100
	08/19/15	<31.6	<b>285</b>	<b>294</b>	<0.0896	<0.102	<0.158	<0.316	<0.102	<b>25.3</b>	<b>45.4</b>	<0.160	<0.540	<0.520	<0.240	<b>2,980</b>	<0.0490	<0.380	<0.310	<2.56
<b>PHILLIPS</b>																				
B-40	02/17/00	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	05/26/00	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	08/28/00	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	11/29/00	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	02/20/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	05/17/01	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	09/26/06 <sup>1</sup>	-	-	-	21.5	<b>2.94</b>	<b>89.4</b>	<b>225</b>	<4.00	<b>18.4</b>	-	<0.0752	<0.800	<b>3.67</b>	<0.432	-	<0.005	<1.60	<0.0960	<b>16.6</b>
	03/20/07	-	-	-	15.2	<b>2.74</b>	<b>86</b>	<b>213</b>	<4.00	<b>21.4</b>	-	<0.752	<b>1.85</b>	<b>7.12</b>	<b>2.01</b>	-	<0.005	<1.60	<0.800	<b>57.0</b>
	09/20/07	-	-	-	15.9	<b>2.12</b>	<b>63.6</b>	<b>153</b>	<2.00	<b>24.2</b>	-	<0.800	<0.800	<b>1.85</b>	<0.800	<0.800	<0.005	<1.60	<0.800	<b>13.6</b>
	03/26/08	<b>2,860</b>	<b>37,600</b>	<b>5,700</b>	3.40	<b>1.85</b>	<b>61.6</b>	<b>132</b>	<2.00	<b>20.9</b>	-	<1.00	<b>14.0</b>	<b>32.8</b>	<b>9.28</b>	<b>3,160</b>	<0.200	<2.00	<1.00	<b>150</b>
	09/17/13	<b>3,100</b>	<b>74,000</b>	<b>21,000</b>	<0.20	<b>1.0</b>	<b>10</b>	<b>17</b>	<1.0	<b>25</b>	-	<1.0	<b>9.1</b>	<b>21</b>	<b>6.9</b>	<b>3,700</b>	<b>0.021</b>	<1.0	<1.0	<b>290</b>
	09/08/14	<b>2,300</b>	<b>48,000</b>	<b>12,000</b>	<0.40	<1.0	<b>7.3</b>	<b>12</b>	<2.0	<b>15</b>	-	<1.0	<b>5</b>	<b>1.0</b>	<b>2,800</b>	<b>0.011</b>	<1.0	<1.0	<b>52</b>	
	03/12/15	<b>1,400</b>	<b>6,900</b>	<b>2,900</b>	<2.0	<2.0	<3.0	<b>5.9</b>	<1.0	<b>14</b>	-	<2.0	<b>2.8</b>	<b>13</b>	<b>2.2</b>	<b>1,100</b>	<b>0.011</b>	<5.0	<2.0	<b>&lt;35</b>
	09/17/15	<b>3,200</b>	<b>16,000</b>	<b>3,900</b>	<2.0	<2.0	<b>5.7</b>	<11.8	<1.0	<b>15</b>	<b>76</b>	<2	<b>4.2</b>	<10	<2	<b>2,600</b>	<b>0.0063</b>	<5	<2	<b>54</b>
P-1	03/17/03	-	-	-	ND	ND	ND	-	ND	<b>22.5</b>	-	ND	<b>216</b>	<b>239</b>	<b>94.6</b>	ND	<b>0.604</b>	ND	ND	<b>625</b>
	03/31/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	<b>52.7</b>	-	<10.0	<b>642</b>	<b>848</b>	<b>244</b>	ND	<b>0.816</b>	<10.0	<10.0	<b>1,730</b>
	09/28/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	-	-	-	-	-	-	-	-	-	-	
	03/28/05	-	-	-	-	-	-	-	<2.00	-	-	-	-	-	-	-	-	-	-	
	03/14/06	-	-	-	<0.500	<0.500	<0.500	<1.00	-	<b>3.34</b>	-	<b>1.68</b>	<b>20.5</b>	<b>29.1</b>	<b>7.79</b>	ND	<0.200	<2.00	<1.00	<b>64.6</b>
	09/26/06	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	<b>14.0</b>	-	<b>4.58</b>	<b>130</b>	<b>185</b>	<b>41.8</b>	-	<0.300	<1.60	<b>0.732</b>	<b>358</b>
	03/20/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	<0.800	-	<0.752	<b>2.26</b>	<b>3.11</b>	<0.800	-	<0.005	<1.60	<0.800	<b>6.98</b>
	09/20/07	-	-	-	<0.200	<0.500	<0.500	<1.00	<2.00	-	-	-	-	-	-	<b>0.0665</b>	-	-	-	
P-1A	01/28/08	<80.0	<238	<476	<b>0.990</b>	<b>0.590</b>	<0.500	<1.00	<2.00	<b>9.79</b>	-	<b>0.632</b>	<b>32.6</b>	<b>35.3</b>	<b>44.4</b>	-	<b>0.217</b>	-	-	<b>180</b>
	03/26/08	<80.0	<245	<490	<b>0.240</b>	<0.500	<0.500	<1.00	<2.00	<b>6.99</b>	-	<1.00	<b>28.3</b>	<b>36.9</b>	<b>28.2</b>	<b>797</b>	<0.200	<2.00	<1.00	<b>151</b>
	06/25/08	<80.0	<236	<472	<b>1.99</b>	<b>1.32</b>	<0.500	<1.00	<2.00	<b>1.60</b>	-	<b>0.746</b>	<b>2.26</b>	<b>6.51</b>	<b>4.48</b>	<b>892</b>	<0.200	<0.500	<1.00	<b>54.2</b>
	09/23/08	<80.0	<243	<485	<b>1.87</b>	<1.00	<1.00	<3.00	<1.00	<b>8.17</b>	-	<5.00	<b>36.2</b>	<b>51.4</b>	<b>30.2</b>	<b>2,400</b>	<0.200	<5.00	<1.00	<b>234</b>
	01/07/09	<80.0	<250	<500	<0.200	<1.00	<1.00	<3.00	<1.00	<b>1.46</b>	-	<b>0.690</b>	<b>3.92</b>	<b>7.03</b>	<b>4.18</b>	<b>72.0</b>	<0.200	<0.500	<1.00	<b>50.7</b>
	03/20/09	<80.0	<250	<500	<0.200	<1.00	<1.00	<3.00	<1.00	<b>1.40</b>	-	<0.500	<b>3.60</b>	<b>6.57</b>	<b>4.33</b>	<b>73.6</b>	<b>0.0104</b>	<0.500	<1.00	<b>37.6</b>
	09/18/09	<80.0	<248	<495	<b>0.320</b>	<1.00	<1.00	<3.00	<1.00	<b>2.19</b>	-	<0.500	<b>5.74</b>	<b>9.38</b>	<b>5.55</b>	<b>1,210</b>	<b>0.00933</b>	<0.500	<1.00	<b>59.4</b>
	03/31/10	<80.0	<240	<481	<0.200	<1.00	<1.00	<3.00	<1.00	<b>3.18</b>	-	<1.00	<b>7.16</b>	<b>10.7</b>	<b>8.35</b>	<b>276</b>	<b>0.0335</b>	<1.00	<1.00	<b>55.9</b>
	09/23/10	<80.0	<98	<490	<0.200	<1.00	<1.00	<3.00	<1.00	<b>13.2</b>	-	<b>1.83</b>	<b>51.2</b>	<b>86.1</b>	<b>59.9</b>	<b>3,490</b>	<b>0.240</b>	<5.00	<1.00	<b>411</b>
	03/24/11	<80.0	<b>672</b>	<472	<0.200	<1.00	<1.00	<3.00	<1.00	<b>5.42</b>	-	<1.00	<b>5.03</b>	<b>10.0</b>	<b>9.55</b>	<b>873</b>	<b>0.0142</b>	<1.00	<1.00	<b>71.6</b>
	09/27/11	<80.0	<125	<625	<0.200	<1.00	<1.00	<3.00	<1.00	<b>86.2</b>	-	<5.00	<b>54.9</b>	<b>109</b>	<b>84.6</b>	<b>6,800</b>	<b>0.00717</b>	<5.00	<5.00	<b>629</b>
dup	09/27/11	<80.0	<111	<556	<0.200	<1.00	<1.00	<3.00	<1.00	-	-	-	-	-	-	-	<b>0.00817</b>	-	-	
	03/28/12	<33	<30	<40	<0.060	<0.090	<0.31	<0.900	<b>18</b>	-	<b>0.51 J</b>	<b>24</b>	<b>35</b>	<b>37</b>	<b>1,000</b>	<b>0.051</b>	<b>0.48 J</b>	<b>0.15 J B</b>	<b>230</b>	
	10/04/12	<80	<b>280</b>	<480	<1.0	<1.0	<1.0	<3.0	<1.0	<b>11</b>	-	<1.0	<b>4.2</b>	<b>5.6</b>	<b>5.1</b>	<b>4,400</b>	<b>0.028</b>	<1.0	<1.0	<b>51</b>
dup	10/04/12	<80	<b>340</b>	<480	<1.0	<1.0	<1.0	<3.0	<1.0	<b>11</b>	-	<1.0	<b>4.6</b>	<b>6.1</b>	<b>5.3</b>	<b>4,700</b>	<b>0.030</b>	<1.0	<1.0	<b>54</b>
dup	04/03/13	<80	<100	<510	<1.0	<1.0	<1.0	<3.0	<1.0	<b>6.6</b>	-	<1.0	<b>5.1</b>	<b>9</b>	<b>4.6</b>	<b>2,500</b>	<b>0.0051</b>	<1.0	<1.0	<b>38</b>
	09/12/13	<80	<b>150</b>	<250	<b>0.99</b>	<0.50	<0.50	<1.0	<1.0	<b>7.4</b>	-	<1.0	<b>&lt;2.0</b>	<b>3</b>	<b>2.4</b>	<b>3,800</b>	<b>0.0095</b>	<1.0	<1.0	<b>&lt;100</b>
	03/11/14	<50	<b>230</b>	<b>340</b>	<0.20	<0.50	<0.50	<1.0	<1.0	<b>6.8</b>	-	<1.0	<b>14</b>	<b>21</b>	<b>18</b>	<b>860</b>	<b>0.0150</b>	<1.0	<1.0	<b>140</b>
dup	03/13/14	<50	<b>170</b>	<270	<0.20	<0.50	<0.50	<1.0	<1.0	<b>5.2</b>	-	<1.0	<b>5.0</b>	<b>16</b>	<b>12</b>	<b>640</b>	<b>0.0160</b>	<1.0	<1.0	<b>100</b>
	09/03/14	<50	<b>260</b>	<260	<b>0.36</b>	<0.50	<0.50	<1.0	<1.0	<b>11</b>	-	<1.0	<b>3.2</b>	<b>5.7</b>	<b>3.5</b>	<b>3,900</b>	<b>0.0120</b>	<1.0	<1.0	<b>36</b>
dup	09/03/14	<50	<b>140</b>	<260	<b>0.49</b>	<0.50	<0.50	<1.0	<1.0	<b>5.2</b>	-	<1.0	<b>5.0</b>	<b>16</b>	<b>12</b>	<b>640</b>	<b>0.0160</b>	<1.0	<1.0	<b>100</b>
	03/11/15	<100	<b>220</b>	<280	<2.0	<2.0	<3.0	<5.0	<1.0	<b>13</b>	-	<2.0	<b>6.3</b>	<b>11</b>	<b>7.5</b>	<b>3,700</b>	<b>0.011</b>	<5.0	<2.0	<b>57</b>
dup	03/11/15	<100	<b>150</b>	<290	<2.0	<2.0	<3.0	<5.0	<1.0	<b>13</b>	-	<2.0	<b>7.7</b>	<b>13</b>	<b>9.1</b>	<b>4,000</b>	<b>0.013</b>	<5.0	<2.0	<b>66</b>
U-5	02/17/00	-	-	-	<b>3.86</b>	<b>0.654</b>	<b>0.501</b>	<b>2.54</b>	-	<b>12.7</b>	-	<b>0.940</b>	<b>17.5</b>	<b>45.6</b>	<b>18</b>					

**TABLE 5**  
**GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA SHALLOW**  
**WELLS – TPH, VOCs, AND METALS**  
 Willbridge Terminals  
 Portland, Oregon

<b>DEQ's 2004 AWQC</b>	-	-	-	-	-	-	-	-	-	0.38	-	3.6	0.54	-	0.012	35	0.12	33
<b>Oak Ridge National Lab (Tier II SCV)</b>	-	-	-	130	9.8	7.3	-	-	3.1	-	-	-	-	120	1.3	-	0.36	-

NOTES:

Data collected prior to 4Q11 are presented as they were reported by previous consultants

J = result is less than reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value

B = compound was found in the blank sample

µg/L = Micrograms per liter

\* = Relative Percent was difference lab control sample and lab control sample duplicate exceed the control limits

<0.00985 = Analyte not detected above the laboratory method reporting limit (MRL) of 0.00985 µg/L

Screening Level Values (SLVs) taken from Table 3-1 of the Portland Harbor Joint Source Control Strategy (JSCS) guidance document, dated December 2005.

SCV = Secondary Chronic Values

DEQ = Oregon Department of Environmental Quality

EPA = United States Environmental Protection Agency

NRWQC = National Recommended Water Quality Criteria

AWOC = Ambient Water Quality Criteria

**Highlighted cells** indicate analyte detections or laboratory MRLs were above the most stringent applicable screening levels presented in Table 3-1 of the Portland Harbor JSCS guidance document, dated December 2005 and revised in July 2007.

**Bold face** font indicates analyte was detected above the laboratory MRL or MDL

- = Not analyzed, not applicable

NS = Not sampled |

TPH = Total Petroleum Hydrocarbons in the gasoline range (TPH-G), diesel range (TPH-D), and heavy oil range (TPH-O)

VOCs = Volatile Organic Compounds

1 = The reporting limit was raised due to dilution necessary for analysis. Sample contains high levels of reported analyte, non-target analyte, and/or matrix interference.

2 = The reporting limit for this analyte was raised due to matrix interference or sample matrix effects.

**TABLE 6**  
**GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA SHALLOW WELLS - PAHs**  
 Willbridge Terminals  
 Portland, Oregon

Well Identification	Date Sampled	2-Methyl-naphthalene		Acenaphthene		Anthracene		Benz(a) Pyrene		Benz(b) fluoranthene		Benz(g,h,i) perylene		Benz(k) fluoranthene		Chrysene		Dibenz(a,h) anthracene		Fluoranthene		Fluorene		Indeno(1,2,3-cd) pyrene		Naphthalene		Phenanthrene		Pyrene		
		( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )				
<b>CHEVRON</b>																																
B-10	02/18/00	-	3.58	ND	ND	0.067	ND	ND	ND	ND	0.14	ND	0.632	ND	11.8	ND	ND	ND	12.9	0.513												
	02/18/00	-	4.83	ND	2.900	5.47	ND	0.66	ND	ND	0.689	ND	1.95	ND	15.9	ND	ND	ND	23.4	1.85												
05/23/00	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.101	ND	ND	ND	11.9	ND	ND	ND	12.7	0.818												
08/25/00	-	1.63	ND	ND	ND	ND	ND	3.18	ND	ND	ND	2.91	ND																			
11/30/00	-	1.42	ND	0.320	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	2.24	ND	ND	ND	0.98	0.16	0.12											
02/23/01	-	1.01	ND	0.252	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.234	ND	ND	ND	ND	1.33	0.225											
05/17/01	-	0.64	ND	ND	ND	ND	ND	0.976	ND	ND	ND	0.521	ND																			
09/19/01	-	0.42	ND	0.1	ND	ND	ND	0.2	ND	ND	ND	0.1	0.36	ND	0.24																	
03/21/02	-	ND	ND	0.188	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.19	ND	ND	ND	ND	1.23	0.22											
09/24/02	-	1.04	0.132	1.490	ND	ND	0.17	ND	0.189	ND	ND	ND	ND	ND	1.32	ND	ND	ND	0.717	1.34	0.245											
03/20/03	-	1.05	ND	0.190	ND	ND	ND	ND	ND	ND	0.194	ND	ND	ND	1.3	ND	ND	ND	1.27	0.236												
09/29/03	-	1.09	ND	0.234	ND	ND	ND	ND	ND	ND	0.463	ND	ND	ND	1.91	ND	ND	ND	2.11	0.436												
03/30/04	-	<0.200	0.671	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	0.588	ND	ND	ND	<0.200	<2.40	ND	ND	5.67	0.891												
03/08/05	-	1.41	<0.300	0.638	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	0.814	ND	ND	ND	4.46	<0.200	<1.40	ND	ND	2.76	0.829											
09/21/05	-	1.27	<0.990	<0.990	<0.990	<0.990	<0.990	<0.990	<0.990	<0.990	<0.990	ND	ND	ND	<1.98	<0.990	2.22	ND	ND	<1.98	1.88	<0.990										
03/14/06	-	1.05	<0.200	0.170	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	0.154	ND	ND	ND	<0.200	<1.50	ND	ND	1.68	0.211												
09/26/06	-	1.64	<0.388	0.527	0.0463	0.059	0.0717	0.11	0.0542	0.0928	0.0265	ND	ND	ND	0.469	4.89	0.0768	ND	ND	3.66	0.635											
03/21/07	-	1.18	<0.383	<0.153	0.0376	0.0329	0.0403	0.042	0.0329	0.051	0.0121	ND	ND	ND	0.236	6.81	0.0335	ND	ND	<3.44	2.83	0.416										
dup	03/21/07	NA	1.06	<0.291	<0.194	0.058	0.0606	0.0578	0.0643	0.0677	0.0846	0.0216	ND	ND	ND	0.275	5.26	0.0545	ND	ND	<2.43	1.80	0.144									
09/18/07	-	<0.962 <sup>z</sup>	0.689	<0.192	<0.962 <sup>z</sup>	0.0293	0.0285	0.027	<0.192	0.0292	0.0413	0.0102	ND	ND	ND	<0.962 <sup>z</sup>	2.20	0.0218	ND	ND	<3.85 <sup>z</sup>	<0.962 <sup>z</sup>	1.35									
03/25/08	-	<0.090	0.728	<0.198	0.114	<0.0198	<0.00495	0.00544	<0.0990	<0.00519	<0.0198	<0.00495	ND	ND	ND	0.214	0.968	<0.00495	ND	ND	<0.594	1.02	0.162									
09/23/08	-	<0.476 <sup>z</sup>	<1.19 <sup>z</sup>	<0.476 <sup>z</sup>	0.182	0.148	0.146	<0.476 <sup>z</sup>	0.131	0.267	0.0500	ND	ND	ND	0.671	1.87	0.136	ND	ND	<0.952 <sup>z</sup>	1.11	0.584										
03/24/09	-	<2.43	2.69	<2.43	<2.43	0.0367	0.0247	0.0251	<0.194	0.0196	0.0853	<0.00971	ND	ND	ND	<2.43	8.59	0.0215	ND	ND	<2.43	4.96	0.819									
dup	03/24/09	-	<0.971	1.85	<0.971	0.0355	0.0236	0.0249	<0.194	0.0179	0.0782	<0.00971	ND	ND	ND	<0.971	7.45	0.0217	ND	ND	<0.971	4.66	0.782									
09/22/09	-	<0.0980	1.09	<0.196	<0.294	0.00944	<0.00490	0.00494	<0.0980	<0.00490	0.0197	<0.00490	ND	ND	ND	0.366	1.48	<0.00490	ND	ND	<0.392	1.25	0.396									
03/18/10	-	<0.0952	0.327 <sup>y</sup>	<0.0952	<0.0952	<0.0476	<0.0476	<0.0476	<0.0592	<0.0476	0.0970	<0.00476	ND	ND	ND	<0.857 <sup>y</sup>	<0.00476	ND	ND	<0.143	0.470 <sup>y</sup>	<0.0952										
09/21/10	-	<0.200	0.899	<0.200	<0.200	0.0117	<0.0100	<0.0100	<0.200	<0.0100	0.0190 <sup>y</sup>	<0.00476	ND	ND	ND	0.208	2.72	<0.0100	ND	ND	<0.400	1.67	0.283									
03/23/11	-	<0.476	1.20	<0.476	<0.476	<0.0476	<0.0476	<0.0476	<0.0592	<0.0476	<0.00476	<0.00476	ND	ND	ND	<0.476	2.52	<0.00476	ND	ND	<0.476	0.654	0.143									
10/03/11	-	<0.100	0.677	<0.100	<0.200	0.0238	0.0326	0.0383	<0.100	0.0362	0.0427	<0.0122	ND	ND	ND	0.239	0.844	0.0318	ND	ND	<0.700	0.480	0.221									
04/05/12	-	<0.095	1.4	<2.4	<0.24	0.030	0.034	0.035	<0.095	0.036	0.053	<0.010	ND	ND	ND	0.30	3.6	0.029	ND	ND	<1.0	1.0	0.37									
10/01/12	-	<0.099	0.83	<0.099	0.55	0.034	0.0052 B	0.049 B	<0.099	0.029 B	0.073 B	<0.0088 B	ND	ND	ND	0.84	1.4	0.012 B	ND	ND	<2.0	1.2	1.5									
4/1/2013	-	0.10	ND	ND	ND	0.025	0.017	0.017	<0.10	0.015	0.041	<0.0052	ND	ND	ND	0.61	1.6	0.013	ND	ND	<2.1	0.77	1.3									
9/16/2013	-	<0.39	0.99	<0.98	<0.98	0.024	<0.020	<0.020	<0.39	<0.020	0.047	<0.020	ND	ND	ND	1.2	1.7	<0.020	ND	ND	<1.6	1.1	2.1									
3/17/2014	-	<0.41	0.96	<0.41	0.84	0.025	0.007	0.006	<0.10	0.0051	0.049	<0.0051	ND	ND	ND	0.75	2.2	<0.0051	ND	ND	<1.0	1.4	1.5									
3/17/2014	-	<0.41	0.8	<0.41	3.1	0.034	0.0068	0.014	<0.10	0.0051	0.058	<0.0051	ND	ND	ND	0.98	2.0	<0.0051	ND	ND	<0.82	1.5	1.6									
9/10/2014	-	<0.55	0.84	<0.55	0.55	0.099	0.12	0.16	<0.55	0.063	0.16	<0.0105	ND	ND	ND	0.71	1.3	0.065	ND	ND	<1.1	1.1	0.93									
3/18/2015	-	0.38	1.7	0.48	0.86	<0.10	<0.10	<0.10	<0.10	0.19	<0.10	<0.10	ND	ND	ND	1.8	5.7	<0.10	ND	ND	<1.0	1.5	2.1									
3/18/2015	-	0.25	1.8	0.41	0.45	<0.10	<0.10	<0.10	<0.10	0.10	<0.10	<0.10	ND	ND	ND	0.50	4.2	<0.11	ND	ND	<1.0	1.6	0.54									
09/19/01	-	3.4	1.02	1.78	0.36	0.36	0.32	0.4	0.3	0.54	0.16	ND	ND</																			

**TABLE 6**  
**GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA SHALLOW WELLS - PAHS**

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**TABLE 6**  
**GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA SHALLOW WELLS - PAHs**  
 Willbridge Terminals  
 Portland, Oregon

Well Identification	Date Sampled	Acenaphthene												Fluoranthene												Indeno (1,2,3-cd) pyrene			Naphthalene						
		( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )							
		2-Methyl naphthalene																																	
		( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )						
02/21/01	-		0.304		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND						
05/16/01	-		0.247		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND						
09/21/01	-		0.240		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND						
03/13/02	-		ND		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND						
03/18/03	-		0.178		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND						
09/24/03	-		0.307		ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND						
03/29/04	-		0.246		<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	0.053	0.0487						
09/27/04	-		0.710		<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100							
09/21/05	-		0.382		<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	0.057	0.0616						
03/15/06	-		0.030		<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	<0.0194	0.0388	0.0226						
09/27/06	-		0.606		<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	<0.0200	0.4002.5	0.103	0.121					
dup	09/27/06	-	0.528		<0.0199	<0.0249 <sup>+</sup>	0.00544	<0.00498	<0.00498	<0.00498	<0.00498	<0.00498	<0.00498	<0.00498	<0.00498	<0.00498	<0.00498	<0.00498	<0.00498	<0.00498	<0.00498	<0.00498	<0.00498	<0.00498	<0.00498	<0.00498	<0.00498	<0.00498	0.279 <sup>+</sup>	0.104	0.109				
	03/22/07	-	0.288		<0.0146 <sup>2</sup>	<0.00971	<0.00485	<0.00485	<0.00485	<0.00485	<0.00485	<0.00485	<0.00485	<0.00485	<0.00485	<0.00485	<0.00485	<0.00485	<0.00485	<0.00485	<0.00485	<0.00485	<0.00485	<0.00485	<0.00485	<0.00485	<0.00485	0.320 <sup>2</sup>	0.0513	0.0478					
	09/18/07	-	0.564		<0.0995	<0.0995	<0.0995	<0.0995	<0.0995	<0.0995	<0.0995	<0.0995	<0.0995	<0.0995	<0.0995	<0.0995	<0.0995	<0.0995	<0.0995	<0.0995	<0.0995	<0.0995	<0.0995	<0.0995	<0.0995	<0.0995	<0.0995	0.896 <sup>2</sup>	<0.0995	0.148					
dup	09/18/07	-	0.0980		0.552	<0.0980	<0.0980	<0.0980	<0.0980	<0.0980	<0.0980	<0.0980	<0.0980	<0.0980	<0.0980	<0.0980	<0.0980	<0.0980	<0.0980	<0.0980	<0.0980	<0.0980	<0.0980	<0.0980	<0.0980	<0.0980	<0.0980	0.882 <sup>2</sup>	0.110	0.151					
	03/25/08	-	<0.0023		0.088	<0.0034	<0.0036	<0.0028	<0.0043	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	0.029	0.021	0.021					
	09/23/08	-	0.0089		0.44	<0.0034	<0.0036	<0.0026	<0.0043	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	<0.0023	0.026	0.018	0.010					
	03/16/09	-	<0.0952		0.272	<0.0952	<0.0952	<0.09476	<0.09476	<0.09476	<0.09476	<0.09476	<0.09476	<0.09476	<0.09476	<0.09476	<0.09476	<0.09476	<0.09476	<0.09476	<0.09476	<0.09476	<0.09476	<0.09476	<0.09476	<0.09476	<0.09476	<0.09476	0.0476	<0.0952	<0.0952				
	09/14/09	-	0.0971		0.304	<0.0971	<0.0971	<0.09485	<0.09485	<0.09485	<0.09485	<0.09485	<0.09485	<0.09485	<0.09485	<0.09485	<0.09485	<0.09485	<0.09485	<0.09485	<0.09485	<0.09485	<0.09485	<0.09485	<0.09485	<0.09485	<0.09485	0.0971	<0.0971	<0.0971					
dup	09/14/09	-	<0.0962		0.808	<0.0962	0.117	0.0265	0.0106	0.00920	<0.00862	0.00587	0.0421	<0.00481	0.515	0.482	0.00562	<0.0971	0.0971	0.0971	0.0971	0.0971	0.0971	0.0971	0.0971	0.0971	0.0971	0.0971	0.0971	0.0971	0.0971	0.0971	0.293		
	03/16/10	-	<0.0971		0.196	<0.0971	<0.0971	<0.09485	<0.09485	<0.09485	<0.09485	<0.09485	<0.09485	<0.09485	<0.09485	<0.09485	<0.09485	<0.09485	<0.09485	<0.09485	<0.09485	<0.09485	<0.09485	<0.09485	<0.09485	<0.09485	<0.09485	<0.09485	<0.09485	<0.09485	0.0485				
	09/20/10	-	<0.190		0.324	<0.190	<0.190	<0.09592	<0.09592	<0.09592	<0.09592	<0.09592	<0.09592	<0.09592	<0.09592	<0.09592	<0.09592	<0.09592	<0.09592	<0.09592	<0.09592	<0.09592	<0.09592	<0.09592	<0.09592	<0.09592	<0.09592	<0.09592	<0.09592	<0.09592	0.190	<0.190	<0.190		
	03/21/11	-	<0.25		0.048	<0.048	0.041	0.044	0.083	0.08	0.15	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025			
	03/22/11	-	<0.20		0.040	<0.044	0.046	0.046	0.089	0.085	0.055	0.021	0.021	0.021	0.021	0.021	0.021	0.021	0.021	0.021	0.021	0.021	0.021	0.021	0.021	0.021	0.021	0.021	0.021	0.021	0.021	0.021			
	09/27/11	-	<0.20		0.24	<0.20	<0.20	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.076				
	03/26/12	-	<0.020		<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	<0.020	0.022				
	09/23/08	-	0.70		<0.29	0.031	0.055	0.071	0.065	0.085	0.026	0.051	0.013	0.013	0.0025	0.0038	0.0247	0.0243	0.0465 <sup>2</sup>	0.406	0.161	0.140 <sup>2</sup>	<0.465 <sup>2</sup>	0.0930	0.0429	<0.0952	0.0952	0.0429	0.0429	0.0429	0.0429	0.0429	0.0429	0.0429	0.0429
dup	09/23/08	-	0.031		0.67	<0.22	0.026	0.079	0.089	0.0707	0.013	0.002																							

**TABLE 6**  
**GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA SHALLOW WELLS - PAHS**  
 Willbridge Terminals  
 Portland, Oregon

**TABLE 6**  
**GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA SHALLOW WELLS - PAHs**  
 Willbridge Terminals  
 Portland, Oregon

Well Identification	Date Sampled	2-Methyl-naphthalene		Acenaphthene		Acenaphthylene		Anthracene		Benz(a) pyrene		Benz(b) fluoranthene		Benz(g,h) phenylene		Benz(k) fluoranthene		Chrysene		Dibenz(a,h) anthracene		Fluoranthene		Fluorene		Indeno(1,2,3-cd) pyrene		Naphthalene		Phenanthrene		Pyrene	
		( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )	( $\mu\text{g/l}$ )				
<b>PHILLIPS</b>																																	
B-40	09/26/06 <sup>1</sup>	-	8.45	<1.752	1.39	0.189	0.0804	<0.1002	<0.500	<0.1002	0.337	<0.0500	<0.500	9.06	<0.0500	<0.2136	13.8	1.42															
	03/20/07	-	26.0	<9.95	<9.95	2.01	0.749	<0.498	<4.98	<0.498	3.86	0.298	<4.98	40.5	0.167	389	87.0	16.6															
	09/20/07	260	5.71	<1.75 <sup>2</sup>	<2.00 <sup>2</sup>	<0.500 <sup>1</sup>	0.507	<0.500 <sup>1</sup>	<0.500 <sup>1</sup>	6.97	<0.500 <sup>1</sup>	141	12.7	1.9																			
	03/26/08	2080	75.6	<24.0	36.8	6.81	2.36	<1.92	<9.62	<1.92	12	0.621	<9.62	9.75	112	0.589	612	275	33.4														
	09/17/13	79	<10	<10	0.74	0.45	<0.51	<5.1	<0.51	1.5	<0.25	<10	21	<0.25	<15	26	9.5																
	09/08/14	59	4.6	<1.1	2.5	0.19	0.11	<0.11	<1.1	<0.054	0.27	<0.054	<1.1	5.1	<0.054	11	9	1.6															
P-1	03/18/03	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND												
	09/26/06	-	0.0137	<0.0102	<0.0102	<0.00508	<0.00508	<0.00508	<0.0102	<0.00508	0.00513	<0.00508	<0.0102	0.0225	<0.00508	<0.04572 <sup>3</sup>	0.0468	0.0195															
	03/20/07	-	<0.00976	<0.00976	<0.00976	<0.00488	<0.00488	<0.00488	<0.00976	<0.00488	<0.00488	<0.00976	<0.00488	<0.00976	<0.00488	<0.0341	0.0139	0.0134															
P-1A	01/28/08	<0.0952	<0.0952	<0.0952	<0.0952	0.00818	<0.00476	0.00818	<0.0952	0.00881	0.0143	<0.00476	<0.0952	<0.0952	<0.00476	<0.0952	<0.00476	<0.0952	<0.00476	<0.0952	<0.00476	<0.0952	<0.00476	<0.0952	<0.00476	<0.0952	<0.00476	<0.0952	<0.00476				
	03/26/08	<0.0962	<0.0962	<0.0962	<0.0962	<0.0962	<0.0962	<0.0962	<0.0962	<0.0962	<0.0962	<0.0962	<0.0962	<0.0962	<0.0962	<0.0962	<0.0962	<0.0962	<0.0962	<0.0962	<0.0962	<0.0962	<0.0962	<0.0962	<0.0962	<0.0962	<0.0962	<0.0962					
	06/25/08	<0.0971	<0.0971	<0.0971	<0.0971	<0.0485	<0.0485	<0.0485	<0.0971	<0.0485	<0.0485	<0.0971	<0.0485	<0.0971	<0.0485	<0.0971	<0.0485	<0.0971	<0.0485	<0.0971	<0.0485	<0.0971	<0.0485	<0.0971	<0.0485	<0.0971	<0.0485	<0.0971					
	09/23/08	<0.0952	<0.0952	<0.0952	<0.0952	<0.0952	<0.0952	<0.0952	<0.0952	<0.0952	<0.0952	<0.0952	<0.0952	<0.0952	<0.0952	<0.0952	<0.0952	<0.0952	<0.0952	<0.0952	<0.0952	<0.0952	<0.0952	<0.0952	<0.0952	<0.0952	<0.0952	<0.0952					
	01/07/09	<0.0976	<0.0976	<0.0976	<0.0976	<0.0976	<0.0976	<0.0976	<0.0976	<0.0976	<0.0976	<0.0976	<0.0976	<0.0976	<0.0976	<0.0976	<0.0976	<0.0976	<0.0976	<0.0976	<0.0976	<0.0976	<0.0976	<0.0976	<0.0976	<0.0976	<0.0976						
	03/20/09	<0.0971	<0.0971	<0.0971	<0.0971	<0.0485	<0.0485	<0.0485	<0.0971	<0.0485	<0.0485	<0.0971	<0.0485	<0.0971	<0.0485	<0.0971	<0.0485	<0.0971	<0.0485	<0.0971	<0.0485	<0.0971	<0.0485	<0.0971	<0.0485	<0.0971	<0.0485	<0.0971					
	09/18/09	<0.0971	<0.0971	<0.0971	<0.0971	<0.0485	<0.0485	<0.0485	<0.0971	<0.0485	<0.0485	<0.0971	<0.0485	<0.0971	<0.0485	<0.0971	<0.0485	<0.0971	<0.0485	<0.0971	<0.0485	<0.0971	<0.0485	<0.0971	<0.0485	<0.0971	<0.0485	<0.0971					
	03/31/10	<0.0952	<0.0952	<0.0952	<0.0952	0.00565	0.00602	0.00624	<0.0952	0.00564	0.00913	<0.00476	<0.0952	<0.0952	<0.00476	<0.0952	<0.00476	<0.0952	<0.00476	<0.0952	<0.00476	<0.0952	<0.00476	<0.0952	<0.00476	<0.0952	<0.00476						
	09/23/10	<0.100	<0.100	<0.100	<0.100	<0.0500	<0.0500	<0.0500	<0.100	<0.0500	<0.0626 <sup>2</sup>	<0.0500	<0.100	<0.100	<0.0500	<0.100	<0.0500	<0.100	<0.0500	<0.100	<0.0500	<0.100	<0.0500	<0.100	<0.0500	<0.100	<0.0500						
	03/24/11	<0.0952	<0.0952	<0.0952	<0.0952	<0.0485	<0.0485	<0.0485	<0.0952	<0.0485	<0.0476	<0.0952	<0.0476	<0.0952	<0.0476	<0.0952	<0.0476	<0.0952	<0.0476	<0.0952	<0.0476	<0.0952	<0.0476	<0.0952	<0.0476	<0.0952	<0.0476						
	09/27/11	<0.0952	<0.0952	<0.0952	<0.0952	<0.0476	<0.0476	<0.0476	<0.0952	<0.0476	<0.0476	<0.0952	<0.0476	<0.0952	<0.0476	<0.0952	<0.0476	<0.0952	<0.0476	<0.0952	<0.0476	<0.0952	<0.0476	<0.0952	<0.0476	<0.0952	<0.0476						
	09/27/11	dup	<0.0980	<0.0980	<0.0980	<0.0980	<0.0980	<0.0980	<0.0980	<0.0980	<0.0980	<0.0980	<0.0980	<0.0980	<0.0980	<0.0980	<0.0980	<0.0980	<0.0980	<0.0980	<0.0980	<0.0980	<0.0980	<0.0980	<0.0980	<0.0980	<0.0980						
	03/28/12	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049	<0.049					
	10/04/12	<0.097	<0.097	<0.097	<0.097	<0.049	<0.049	<0.049	<0.097	<0.049	<0.049	<0.097	<0.049	<0.049	<0.097	<0.049	<0.097	<0.049	<0.097	<0.049	<0.097	<0.049	<0.097	<0.049	<0.097	<0.049	<0.097	<0.049					
	10/05/12	dup	<0.099	<0.099	<0.099	<0.099	<0.099	<0.099	<0.099	<0.099	<0.099	<0.099	<0.099	<0.099	<0.099	<0.099	<0.099	<0.099	<0.099	<0.099	<0.099	<0.099	<0.099	<0.099	<0.099	<0.099	<0.099	<0.099					
	04/03/13	<0.10	<0.10	<0.10	<0.10	<0.0500	<0.0500	<0.0500	<0.10	<0.0500	<0.0500	<0.10	<0.0500	<0.10	<0.10	<0.0500	<0.10	<0.0500	<0.10	<0.0500	<0.10	<0.0500	<0.10	<0.0500	<0.10	<0.0500	<0.10	<0.0500					
	04/03/13	dup	<0.10	<0.10	<0.10	<0.10	<0.0500	<0.0500	<0.0500	<0.10	<0.0500	<0.0500	<0.10	<0.0500	<0.10	<0.10	<0.0500	<0.10	<0.0500	<0.10	<0.0500	<0.10	<0.0500	<0.10	<0.0500	<0.10	<0.0500	<0.10	<0.0500				
	09/12/13	<0.10	<0.10	<0.10	<0.10	<0.0500	<0.0500	<0.0500	<0.10	<0.0500	<0.0500	<0.10	<0.0500	<0.10	<0.10	<0.0500	<0.10	<0.0500	<0.10	<0.0500	<0.10	<0.0500	<0.10	<0.0500	<0.10	<0.0500	<0.10	<0.0500					
	03/11/14	<0.099	<0.099	<0.099	<0.099	<0.0500	<0.0500	<0.0500	<0.099	<0.0500	<0.0500	<0.099	<0.0500	<0.099	<0.099	<0.0500	<0.099	<0.0500	<0.099	<0.0500	<0.099	<0.0500	<0.099	<0.0500	<0.099	<0.0500	<0.099	<0.0500					
	09/31/14	<0.10	<0.10	<0.10	<0.10	<0.0501	<0.0501	<0.0501	<0.																								

**TABLE 6**  
**GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA SHALLOW WELLS - PAHs**  
 Willbridge Terminals  
 Portland, Oregon

Well Identification	Date Sampled	2-Methyl naphthalene ( $\mu\text{g/l}$ )	Acenaphthene ( $\mu\text{g/l}$ )	Acenaphthylene ( $\mu\text{g/l}$ )	Anthracene ( $\mu\text{g/l}$ )	Benz(a) anthracene ( $\mu\text{g/l}$ )	Benz(a) pyrene ( $\mu\text{g/l}$ )	Benz(b) fluoranthene ( $\mu\text{g/l}$ )	Benz(g,h) phenylene ( $\mu\text{g/l}$ )	Benz(k) fluoranthene ( $\mu\text{g/l}$ )	Chrysene ( $\mu\text{g/l}$ )	Dibenz(a,h) anthracene ( $\mu\text{g/l}$ )	Fluoranthene ( $\mu\text{g/l}$ )	Fluorene ( $\mu\text{g/l}$ )	Indeno(1,2,3-cd) pyrene ( $\mu\text{g/l}$ )	Naphthalene ( $\mu\text{g/l}$ )	Phenanthrene ( $\mu\text{g/l}$ )	Pyrene ( $\mu\text{g/l}$ )
<b>Portland Harbor Joint Source Control Screening Level Values (<math>\mu\text{g/l}</math>)</b>																		
EPA's 2004 NRWQC	--	990	--	40,000	0.018	0.018	0.018	--	0.018	0.018	0.018	140	5,300	0.018	--	--	4,000	
DEQ's 2004 AWQC	--	990	--	40,000	0.018	0.018	0.018	--	0.018	0.018	0.018	140	5,300	0.018	--	--	4,000	
EPA's 2004 NRWQC	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
DEQ's 2004 AWQC	--	520	--	--	--	--	--	--	--	--	--	--	--	--	620	--	--	

**NOTES:**

Data collected prior to 4Q11 are presented as they were reported by previous consultants

J = result is less than reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value

B = compound was found in the blank sample

\* = Relative percent was difference lab control sample and lab control sample duplicate exceed the control limits

$\mu\text{g/l}$  = Micrograms per liter

<0.00985 = Analyte not detected above the laboratory method reporting limit (MRL) of 0.00985  $\mu\text{g/L}$ .

Screening Level Values (SLVs) taken from Table 3-1 of the Portland Harbor Joint Source Control Strategy (JSCS) guidance document, dated December 2005.

DEQ = Oregon Department of Environmental Quality

EPA = United States Environmental Protection Agency

NRWQC = National Recommended Water Quality Criteria

AWQC = Ambient Water Quality Criteria

Shading indicates analyte detections or laboratory MRLs were above the most stringent applicable screening levels presented in Table 3-1 of the Portland Harbor JSCS guidance document, dated December 2005 and revised in July 2<sup>1</sup>

**Bold face** font indicates analyte was detected above the laboratory MRL or MD

-- = Not analyzed

NS = Not sampled

NA = Not available

PAHs = Polynuclear Aromatic Hydrocarbons

<sup>1</sup> = The reporting limit was raised due to dilution necessary for analysis. Sample contains high levels of reported analyte, non-target analyte, and/or matrix interferer

<sup>2</sup> = The reporting limit for this analyte was raised due to matrix interference or sample matrix effect

<sup>3</sup> = Analyte was detected in the associated method blank

<sup>4</sup> = Naphthalene was detected in the Method Blank at 0.0165  $\mu\text{g/L}$ . Sample has a detection for naphthalene at 0.0468  $\mu\text{g/L}$ . The result has been qualified and should be considered an estimate. The lab was unable to perform correct action due to insufficient volume remaining

<sup>5</sup> = Analyte was detected in the associated blank at greater than one-half the MRL, but samples are NI

<sup>6</sup> = Analyte was detected in the associated method blank. Analyte concentration in the sample is greater than 10 times the concentration found in the method blank

<sup>7</sup> = The laboratory control sample (LCS) and/or LCS Duplicate recovery was above the acceptance limit

<sup>8</sup> = Result is an estimated value

**TABLE 7**  
**GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA CLUSTER WELLS - TPH, VOCs, AND METALS**  
 Willbridge Terminals  
 Portland, Oregon

Well Identification	Date Sampled	TPH		VOCs							Metals								
		TPH-G	TPH-D	TPH-O	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	Arsenic	Cadmium	Chromium	Copper	Lead	Manganese	Mercury	Selenium	Silver	Zinc
		(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	
<b>CHEVRON</b>																			
B-19	03/20/03	-	-	-	7.76	<b>2.09</b>	<b>0.620</b>	<b>2.51</b>	-	<b>45.3</b>	ND	ND	ND	ND	-	ND	ND	ND	ND
	09/29/03	-	-	-	5.93	<b>1.98</b>	<b>1.56</b>	<b>7.44</b>	-	<b>40.4</b>	ND	<b>20.3</b>	<b>29.7</b>	<b>9.09</b>	-	<b>0.234</b>	ND	ND	<b>57.7</b>
	03/29/04	-	-	-	2.26	<b>1.32</b>	<0.500	<b>2.88</b>	-	<b>43.5</b>	<1.00	<b>4.87</b>	<b>8.31</b>	<b>2.79</b>	-	<0.200	<1.00	<1.00	<b>19.2</b>
	03/09/05	-	-	-	5.53	<b>2.57</b>	<1.00	<b>2.76</b>	<1.00	<b>40.7</b>	<1.00	<b>18.1</b>	<b>30.7</b>	<b>9.18</b>	-	<0.200	<2.00	<1.00	<b>54.5</b>
	06/22/05	-	-	-	<1.00	<b>2.02</b>	<1.00	<b>2.61</b>	<1.00	<b>47.8</b>	<1.00	<b>26.5</b>	<b>37</b>	<b>9.22</b>	-	<0.200	<2.00	<1.00	<b>63.3</b>
	09/22/05	-	-	-	1.54	<b>1.99</b>	<1.00	<b>3.60</b>	<1.00	<b>48.1</b>	<1.00	<b>3.47</b>	<b>5.98</b>	<b>1.59</b>	-	<0.200	<2.00	<1.00	<b>10.5</b>
	03/14/06	-	-	-	<1.00	<b>1.11</b>	<1.00	<b>2.21</b>	<1.00	<b>52.3</b>	<1.00	<b>3.91</b>	<b>5.68</b>	<b>1.67</b>	-	<0.200	<2.00	<1.00	<b>11.7</b>
	03/25/08	-	-	-	<0.400	<2.00	<2.00	<4.00	<2.00	<b>43.7</b>	<0.380	<b>11.3</b>	<b>17.2</b>	<b>5.08</b>	-	<0.200	<5.00	<0.120	<33.0
	06/26/08	-	-	-	0.27	<b>0.630</b>	<b>0.230</b>	<b>1.74</b>	<1.00	<b>36.7</b>	<b>0.388</b>	<b>10.0</b>	<b>16.2</b>	<b>6.05</b>	<b>4,110</b>	<0.200	<b>0.146</b>	<1.00	<b>32.0</b>
	03/18/09	<b>928</b>	<b>63,100</b>	1730	<1.00	<5.00	<5.00	<15.00	<5.00	<b>39.8</b>	<5.00	<b>14.0</b>	<b>18.2</b>	<b>4.84</b>	<b>4,590</b>	<b>0.0170</b>	<5.00	<1.00	<b>35.1</b>
dup	03/18/09	<b>920</b>	<b>33,900</b>	816	0.34	<1.00	<1.00	<3.00	<1.00	<b>40.7</b>	<5.00	<b>22.2</b>	<b>31.3</b>	<b>8.40</b>	<b>4,110</b>	<b>0.0590</b>	<5.00	<1.00	<b>56.0</b>
	09/15/09	<b>774</b>	<b>7,590</b>	<500	0.400	<b>1.01</b>	<1.00	-	<1.00	<b>38.4</b>	<0.500	<b>8.29</b>	<b>13.1</b>	<10.0	<b>4,560</b>	<0.200	<0.500	<1.00	<b>22.0</b>
	03/23/10	<b>1,040</b>	<b>21,200</b>	<b>674</b>	<0.400	<2.00	<2.00	-	<2.00	<b>43.3</b>	<1.00	<b>3.62</b>	<b>4.92</b>	<b>2.15</b>	<b>3,980</b>	<0.200	<1.00	<1.00	<b>17.0</b>
	09/22/10	<b>1,130</b>	<b>29,400</b>	1140	<0.400	<2.00	<2.00	-	<2.00	<b>38.6</b>	<2.00	<b>6.70</b>	<b>12.0</b>	<b>4.14</b>	<b>4,230</b>	<0.200	<5.00	<2.00	<b>24.3</b>
	09/22/10	<b>1,230</b>	<b>36,300</b>	1580	<0.400	<2.00	<2.00	-	<2.00	<b>37.9</b>	<1.00	<2.00	<b>4.45</b>	<b>1.77</b>	<b>4,100</b>	<0.200	<5.00	<1.00	<10.0
	03/22/11	<b>1,290</b>	<b>27,500</b>	686	0.300	<1.00	<1.00	-	<1.00	<b>42.9</b>	<1.00	<b>7.82</b>	<b>11.5</b>	<b>3.95</b>	<b>4,610</b>	<0.200	<1.00	<1.00	<b>24.3</b>
	09/30/11	<b>1,190</b>	<b>16,000</b>	<500	<b>0.390</b>	<1.00	<1.00	-	<1.00	<b>45.1</b>	<1.00	<2.00	<2.00	<1.00	<b>4,280</b>	<0.200	<1.00	<1.00	<10.0
	04/05/12	<b>960</b>	<b>23,000 *</b>	750 *	<b>0.22 J</b>	<b>0.42 J</b>	<b>0.15 J</b>	<b>0.70 J</b>	<1.00	<b>44</b>	<b>0.19 J</b>	<b>9.8</b>	<b>13</b>	<b>3.6 B</b>	<b>4,300</b>	<b>0.0042 J</b>	<b>0.06 JB</b>	<b>0.041 J</b>	<b>30</b>
dup	04/05/12	<b>960</b>	<b>28,000 *</b>	900 *	<b>0.22 J</b>	<b>0.42 J</b>	<b>0.14 J</b>	<b>0.71 J</b>	<1.00	<b>41</b>	<1.0	<b>3</b>	<b>3.5</b>	<b>1.1 B</b>	<b>4,300</b>	<b>0.0036 J</b>	<1.0	<1.0	<b>9.3 J</b>
	10/01/12	<b>600</b>	<b>5,600</b>	<500	<1.00	<1.00	<1.00	<3.00	<1.00	<b>39</b>	<10.0	<20	<b>3.8</b>	<10.0	<b>4,400</b>	-	<1.0	<1.0	<10.0
dup	10/01/12	<b>610</b>	<b>2,700</b>	<480	<1.00	<1.00	<1.00	<3.00	<1.00	<b>38</b>	<10.0	<20	<b>3.3</b>	<10.0	<b>4,400</b>	-	<1.0	<1.0	<10.0
	04/01/13	<b>1,200</b>	<b>10,000</b>	660	<1.0	<1.0	<1.0	<3.0	<1.0	<b>37</b>	<1.0	<b>4.6</b>	<b>4.5</b>	<b>1.5</b>	<b>4,200</b>	<b>0.26</b>	<1	<1	<b>13</b>
	09/16/13	<b>1,200</b>	<b>830</b>	<250	<0.20	<0.50	<0.50	<1.0	<1.0	<b>41</b>	<1.0	<b>4.8</b>	<b>6.6</b>	<b>1.8</b>	<b>4,500</b>	-	<1.0	<1.0	<b>18</b>
	03/17/14	<b>940</b>	<b>4,600</b>	<b>370</b>	<0.20	<0.50	<0.50	<1.0	<1.0	<b>39</b>	<1.0	<b>8.3</b>	<b>11</b>	<b>4.2</b>	<b>4,200</b>	<0.200	<1.0	<1.0	<b>25</b>
	09/08/14	<b>980</b>	<b>4,900</b>	<b>350</b>	<0.20	<0.50	<0.50	<1.0	<1.0	<b>39</b>	<1.0	<b>4.9</b>	<b>5.5</b>	<b>1.8</b>	<b>4,200</b>	<b>0.24</b>	<1.0	<1.0	<b>14</b>
	03/09/15	<b>870</b>	<b>6,100</b>	<b>1,300</b>	<2.0	<2.0	<2.0	<5.0	<1.0	<b>38</b>	<2.0	<b>4.4</b>	<10	<2.0	<b>4,400</b>	-	<5.0	<2.0	<b>&lt;35</b>
	09/14/15	<b>1,000</b>	<b>3,800</b>	<b>880</b>	<2.0	<2.0	<3.0	<5.0	<1.0	<b>42</b>	<2.0	<b>3.9</b>	<10	<2.0	<b>4,600</b>	<2.000	<5.0	<2.0	<b>&lt;35</b>

**TABLE 7**  
**GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA CLUSTER WELLS - TPH, VOCs, AND METALS**  
 Willbridge Terminals  
 Portland, Oregon

Well Identification	Date Sampled	VOCs										Metals									
		TPH-G	TPH-D	TPH-O	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	Arsenic	Cadmium	Chromium	Copper	Lead	Manganese	Mercury	Selenium	Silver	Zinc		
					(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)		
<b>B-26</b>	03/30/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	3.45	30.5	22.0	48.5	41.5	-	<0.200	<1.00	<1.00	140		
	03/09/05	-	-	-	2.94	<1.00	12.5	2.36	<1.00	34.5	4.11	2.74	8.01	6.96	-	<0.200	<2.00	<1.00	17.6		
	06/22/05	-	-	-	11.9	<1.00	46.1	4.26	<1.00	39.7	13.0	15.2	31.9	20.8	-	<0.200	<2.00	<1.00	68.9		
	09/22/05	-	-	-	12.4	1.19	56.8	6.21	<1.00	35.1	6.01	3.20	10.3	7.54	-	<0.200	<2.00	<1.00	26.1		
	03/26/08	-	-	-	43.3	<1.00	338	11.0	<1.00	33.6	0.700	<1.00	2.90	5.82	-	<0.200	<5.00	<0.120	163		
dup	03/26/08	-	-	-	51.9	1.04	352	13.5	<1.00	39.2	1.800	1.78	8.76	14.7	-	<0.200	<5.00	<0.120	419		
	06/26/08	-	-	-	7.66	0.85	64.8	6.6	<1.00	34.6	4.020	6.21	14.10	13.5	4,060	<0.200	0.113	<1.00	219		
	01/09/09	-	-	-	63.0	1.55 J	159	-	<5.00	46.9	2.20	2.23	9.04	22.9	4,070	<0.200	0.130 J	0.640 J	813		
	03/27/09	-	-	-	14.3	<5.00	91.4	-	<5.00	28.6	<0.500	<2.00	2.12	5.21	3,880	<0.200	<0.500	<1.00	32.9		
	09/22/09	-	-	-	27.4	<2.00	164	-	<2.00	30.1	<0.500	<2.00	3.07	4.14	4,170	<0.200	<0.500	<1.00	24.2		
	03/25/10	-	-	-	21.6	1.42	99.9	-	<1.00	42.2	3.79	2.05	9.13	26.3	4,450	<0.200	<1.00	<1.00	509		
dup	03/25/10	-	-	-	21.2	1.51	101	-	<1.00	40.5	2.55	2.10	<20.0	16.4	4,520	<0.200	<1.00	<1.00	299		
	09/29/10	-	-	-	19.4	<20.0	165	-	<20.0	35.8	<10.0	<20.0	<20.0	<10.0	4,180	<0.200	<10.0	<10.0	120		
dup	09/29/10	-	-	-	17.8	<10.0	150	-	<10.0	-	-	-	-	-	-	-	-	-	-		
	03/24/11	-	-	-	8.12	<2.00	74.4	-	<2.00	44.1	2.48	<2.00	5.25	14.1	3,990	<0.200	<1.00	<1.00	651		
	10/03/11	-	-	-	13.6	<2.00	146	-	<2.00	32.4	<1.00	<2.00	<2.00	5.32	3,480	<0.200	<1.00	<1.00	45.3		
	10/03/12	1,000	4,600	<500	<2.0	<2.0	11	<6.0	<2.0	44	13	<20.0	17	<10.0	4,000	-	<1.00	<1.00	510		
dup	10/03/12	1,000	2,800	<500	<2.0	<2.0	10	<6.0	<2.0	443	13	<20.0	18	<10.0	3,900	-	<1.00	<1.00	480		
	09/24/13	2,700	1,600	<250	2.3	<5.0	29	<10	<10	50	20	16	26	13	3,700	-	<1.0	<1.0	690		
dup	09/24/13	3,300	3,700	450	2.4	0.83	31	2.6	<1.0	46	17	53	22	10	3,600	-	<1.0	<1.0	590		
<b>B-33</b>	03/20/03	-	-	-	ND	ND	ND	ND	-	4.83	ND	4.37	11.4	12.4	-	ND	ND	ND	22.3		
	09/29/03	-	-	-	0.558	0.735	<0.500	1.35	-	34.2	6.99	71.1	248	128	-	ND	1.24	ND	385		
	03/30/04	-	-	-	<0.500	<0.500	<0.500	<1.00	-	15.5	8.30	45.1	164	110	-	<2.00	<1.00	<1.00	389		
	03/09/05	-	-	-	<1.00	<1.00	<1.00	<2.00	<1.00	26.4	1.06	34.2	66.8	51.3	-	<0.200	2.04	<1.00	157		
	06/22/05	-	-	-	<1.00	<1.00	<1.00	<3.00	<1.00	15.6	<1.00	22.1	56.0	26.4	-	<0.200	<2.00	<1.00	99.8		
	09/22/05	-	-	-	<1.00	<1.00	<1.00	<3.00	<1.00	23.7	<1.00	9.16	25.0	10.9	-	<0.200	<2.00	<1.00	48.4		
	03/15/06	-	-	-	<1.00	<1.00	<1.00	<3.00	<1.00	5.79	<1.00	2.61	6.65	4.41	-	<0.200	<2.00	<1.00	68.3		
	03/27/08	-	-	-	<2.00	<10.0	<10.0	<20.0	<10.0	24.4	<0.380	5.81	15.2	9.26	-	<0.200	<5.00	<0.120	331		
	06/26/08	-	-	-	0.28	0.9	<1.00	0.9	<1.00	33.9	0.386	6.21	16.30	10.1	3,460	<0.200	0.093	<1.00	246		
	03/18/09	408	35,500	1,570	0.21	<1.00	<1.00	<3.00	<1.00	61.7	<5.00	39.2	116.00	70.1	4,380	0.11	<5.00	<1.00	2,520		
	09/15/09	454	25,600	856	0.250	<1.00	<1.00	-	<1.00	34.2	<5.00	2.44	6.17	<10.0	3,710	<0.200	<0.500	<1.00	158		
	03/23/10	460	20,900	1,240	<0.400	<2.00	<2.00	-	<2.00	36.6	<1.00	3.13	10.1	6.32	3,310	<0.200	<1.00	<1.00	625		
	09/22/10	558	13,800	590	<0.400	<2.00	<2.00	-	<2.00	49.6	<2.00	<4.00	9.42	7.94	3,680	<0.200	<5.00	<2.00	543		
	03/22/11	366	2,220	<472	<0.200	1.47	<1.00	-	<1.00	34.9	<1.00	<10.0	<10.0	6.15	3,320	<0.200	<1.00	<1.00	481		
dup	03/22/11	<80.0	1,600	<485	<0.200	<1.00	<1.00	-	<1.00	37.0	<1.00	<2.00	2.87	2.05	3,690	<0.200	<1.00	<1.00	65.0		
	09/30/11	540	3,800	<625	<0.200	<1.00	<1.00	-	<1.00	43.8	<1.00	2.77	7.39	5.40	3,840	<0.200	<1.00	<			

**TABLE 7**  
**GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA CLUSTER WELLS - TPH, VOCs, AND METALS**  
 Willbridge Terminals  
 Portland, Oregon

Well Identification	Date Sampled	VOCs										Metals							
		TPH-G	TPH-D	TPH-O	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	Arsenic	Cadmium	Chromium	Copper	Lead	Manganese	Mercury	Selenium	Silver	Zinc
					(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	
<b>CR-3</b>	03/09/05	-	-	-	<1.00	<1.00	<1.00	<2.00	<1.00	15.6	2.83	23.9	59.1	41.0	-	<0.200	<2.00	<1.00	216
	06/22/05	-	-	-	<1.00	<1.00	<1.00	<3.00	<1.00	25.9	2.06	41.4	70.8	50.4	-	<0.200	<2.00	<1.00	218
	09/22/05	-	-	-	<1.00	<1.00	<1.00	<3.00	<1.00	1.91	<1.00	<1.00	3.46	1.23	-	<0.200	<2.00	<1.00	7.06
	12/19/07	-	-	-	<0.200	<1.00	<1.00	<2.00	<1.00	3.29	<0.0752	5.93	9.57	6.16	-	<0.200	<1.60	<0.0970	<40.0
	03/27/08	-	-	-	<0.200	<1.00	<1.00	<2.00	<1.00	1.21	<0.380	1.32	3.48	1.95	-	<0.200	<5.00	<0.120	<33.0
	06/26/08	-	-	-	<0.200	<1.00	<1.00	<3.00	<1.00	1.13	0.109	0.876	1.37	1.40	463	<0.200	<0.500	<1.00	11.7
	09/26/08	-	-	-	<0.200	<1.00	<1.00	<3.00	<1.00	1.82	<0.500	3.63	6.21	4.38	594	<0.200	0.267	<1.00	18.4
	01/08/09	-	-	-	<0.200	<1.00	<1.00	-	<1.00	0.746 J	<0.500	0.724 J	3.83	0.890 J	21.6	<0.200	<0.500	<1.00	4.85 J
	03/26/09	-	-	-	<0.200	<1.00	<1.00	-	<1.00	1.05	<0.500	<2.00	2.12	1.47	184	<0.200	<0.500	<1.00	5.58
	06/29/04	-	-	-	-	-	-	-	-	46.7	<1.00	1.06	<2.00	1.05	--	<1.00	<1.00	<1.00	20.6
<b>CR-26</b>	10/01/04	-	-	-	-	-	-	-	-	100	<1.00	18.5	23.3	9.4	--	<0.200	1.76	<1.00	64.9
	12/16/04	-	-	-	-	-	-	-	-	95.9	<1.00	4.03	5.86	2.36	--	<0.200	<2.00	<1.00	16.9
	03/09/05	-	-	-	<1.00	<1.00	<1.00	<2.00	<1.00	-	-	-	-	-	-	-	-	-	
	06/22/05	-	-	-	<1.00	<1.00	<1.00	<3.00	<1.00	-	-	-	-	-	-	-	-	-	
	09/22/05	-	-	-	<1.00	<1.00	<1.00	<3.00	<1.00	-	-	-	-	-	-	-	-	-	
	01/31/06	-	-	-	-	-	-	-	-	156	<1.00	14.8	16.8	8.51	9,170	<0.200	<2.00	<1.00	55.6
	09/26/06	-	-	-	-	-	-	-	-	150	<1.00	<1.00	1.83	<1.00	--	<0.200	1.59	<1.00	<10.0
	09/19/07	-	-	-	-	-	-	-	-	149	<0.0752	<0.800	2.34	0.580	8,260	<0.200	<1.60	<0.0970	16.4
	12/18/07	-	-	-	<0.200	<1.00	<1.00	<2.00	<1.00	107	<1.00	5.33	6.39	2.77	-	<0.200	<2.00	<1.00	17.4
	03/25/08	<80.0	<245	<490	<0.200	<0.500	<0.500	<1.00	<2.00	134	<0.380	27.9	37.4	22	-	<0.200	<5.00	0.18	97.3
	06/24/08	<80.0	<240	<481	<0.200	<1.00	<1.00	<3.00	<1.00	158	<0.500	0.500	0.743	0.791	6,900	<0.200	0.389	<1.00	7.77
	09/23/08	<80.0	<243	<485	<0.200	<1.00	<1.00	<3.00	<1.00	152	0.153	0.531	1.32	0.351	7,010	<0.200	0.954	<1.00	2.89
	01/06/09	<80.0	<b>287</b>	<490	<0.200	<1.00	<1.00	<3.00	<1.00	136	0.170	14.8	15.6	8.35	7,840	<0.200	0.170	<1.00	49.4
	03/26/09	<80.0	<248	<495	<0.200	<1.00	<1.00	-	<1.00	102	<0.500	<2.00	<2.00	1.40	6,700	<0.200	<0.500	<1.00	6.55
	09/24/09	<80.0	<250	<500	<0.200	<1.00	<1.00	-	<1.00	99.0	<0.500	<2.00	<2.00	<1.00	6,860	<0.200	<0.500	<1.00	<5.00
	03/26/10	<80.0	<243	<485	<0.200	<1.00	<1.00	-	<1.00	95.7	<1.00	<2.00	<2.00	1.58	6,600	<0.200	<1.00	<1.00	<10.0
	10/01/10	<80.0	<97.1	<485	<0.200	<1.00	<1.00	-	<1.00	102	<10.0	<20.0	<20.0	<10.0	6,940	<0.200	<10.0	<10.0	<100
	03/25/11	<80.0	<96.2	<481	<0.200	<1.00	<1.00	-	<1.00	125	<1.00	<2.00	<2.00	<1.00	6,890	<0.200	<1.00	<1.00	<10.0
	10/01/12	<80.0	<b>350</b>	<500	<1.00	<1.00	<1.00	<3.00	<1.00	36	<5.0	<10.0	<10.0	<5.0	6,100	-	<5.0	<5.0	<100
	09/24/13	<80	<b>170</b>	<260	<0.20	<0.50	<0.50	<1.0	<1.0	45	<1.0	2.7	<2.0	1.0	5,400	-	<1.0	<1.0	<10
	09/08/14	<50	<b>560</b>	<270	<0.20	<0.50	<0.50	<1.0	<1.0	43	<1.0	5.8	5.2	2.6	5,900	<0.20	<1.0	<1.0	21

**TABLE 7**  
**GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA CLUSTER WELLS - TPH, VOCs, AND METALS**  
 Willbridge Terminals  
 Portland, Oregon

Well Identification	Date Sampled	VOCs										Metals							
		TPH-G	TPH-D	TPH-O	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	Arsenic	Cadmium	Chromium	Copper	Lead	Manganese	Mercury	Selenium	Silver	Zinc
		(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	
CR-27C	09/25/06	-	-	-	-	-	-	-	7.96	<1.00	<1.00	<1.00	<1.00	-	<0.200	1.63	<1.00	<10.0	
	12/18/07	<80.0	827	1,020	<0.200	<1.00	<1.00	<2.00	<1.00	5.95	<1.00	4.81	9.14	11.5	-	<0.200	<2.00	<1.00	88.6
	03/25/08	<80.0	<245	<490	<0.200	<0.500	<0.500	<1.00	<2.00	7.02	<0.380	<1.00	<2.70	1.07	-	<0.200	<5.00	<0.120	<33.0
	06/24/08	<80.0	<240	<481	<0.200	<1.00	<1.00	<3.00	<1.00	7.70	<0.500	<2.00	0.795	0.606	560	<0.200	1.01	<1.00	6.55
	09/23/08	<80.0	<243	<485	<0.200	<1.00	<1.00	<3.00	<1.00	6.78	0.111	0.526	2.79	1.06	315	<0.200	1.20	<1.00	14.5
	01/06/09	<80.0	<245	<490	<0.200	<1.00	<1.00	<3.00	<1.00	7.42	0.120	1.18	1.60	2.20	446	<0.200	<0.500	<1.00	18.4
	03/26/09	<80.0	<245	577	<0.200	<1.00	<1.00	-	<1.00	5.97	<0.500	<2.00	2.14	4.03	387	<0.200	<0.500	<1.00	16.4
	03/26/10	<80.0	<243	<485	<0.200	<1.00	<1.00	-	<1.00	5.11	<1.00	<2.00	3.31	3.09	341	<0.200	<1.00	<1.00	102
	10/01/10	<80.0	<97.1	<485	<0.200	<1.00	<1.00	-	<1.00	4.03	<1.00	<2.00	3.18	1.59	260	<0.200	<1.00	<1.00	47.9
	03/25/11	<80.0	<97.1	<485	<0.200	<1.00	<1.00	-	<1.00	5.70	<1.00	<2.00	2.33	569	<0.200	<1.00	<1.00	<1.00	13.2
	10/01/12	<80.0	410	<490	<1.00	<1.00	<1.00	<3.00	<1.00	6.6	<5.0	<10.0	<10.0	<5.0	380	-	<5.0	<5.0	<50
	09/24/13	<80	<100	<260	<0.20	<0.50	<0.50	<1.0	<1.0	8.1	<1.0	20	11	4.5	510	-	<1.0	<1.0	35
	09/08/14	<50	310	<270	<0.20	<0.50	<0.50	<1.0	<1.0	8.8	<1.0	7.1	9.3	3.4	490	<0.20	<1.0	<1.0	28
CR-28A	12/19/07	10,500	3,940	<490	15.1	<10.0	1,500	155	<10.0	32.8	0.294	73.7	103	83.8	5,010	<0.20	1.88	0.241	261
	03/27/08	9,080	3,460	<490	18.1	<10.0	1,770	151	<10.0	29.9	<0.380	22.6	39.4	37	3,660	<0.20	<5.00	<0.120	85.8
	06/25/08	9,760	2,330	<485	10.8	6.40	1,300	115	<10.0	32.0	0.746	37.6	64.5	67.5	4,480	<0.20	0.588	0.221	132
	09/25/08	10,200	2,630	344	7.8	6.80	1,410	121	<10.0	26.8	<5.00	33.3	64.3	58.3	4,350	<0.20	<5.00	<10.0	139
	01/08/09	10,400	3,850	<490	9.00	6.80 J	1,550	-	<20.0	31.6	<0.500	22.3	33.9	38.2	4,629	<0.20	<0.500	<1.00	81.1
	03/27/09	11,500	3,870	<500	8.00	<20.0	1,670	-	<20.0	27.4	<0.500	9.89	15.0	26.9	3,860	<0.20	<0.500	<1.00	43.5
	09/24/09	10,300	4,480	<500	<10.0	<50.0	1,500	-	<50.0	25.7	<0.500	11.4	14.9	20.4	3,720	<0.20	<0.500	<1.00	40.3
	01/26/10	11,000	1,300	140	5	6	1,100	-	<1	-	-	-	-	-	3,590	<0.20	-	-	-
	03/26/10	-	-	-	-	-	-	-	-	26.8	<1.00	<2.00	<20.0	13.2	3,840	<0.20	<1.00	<1.00	<10.0
	05/13/10	14,000	2,400	210	-	-	-	-	-	-	-	-	-	-	-	<0.20	-	-	-
	06/14/10	12,000	2,200	<340	5	5	1,200	86	<1	-	-	-	-	-	4,640	<0.20	-	-	-
	07/13/10	9,700	2,600	210	-	-	-	-	-	-	-	-	-	-	-	<0.20	-	-	-
	08/17/10	17,000	2,000	<350	5	6	2,400	140	<1	-	-	-	-	-	17,200	<0.20	-	-	-
	09/15/10	16,000	2,000	<350	5	5	1,000	89	<0.5	-	-	-	-	-	13,800	<0.20	-	-	-
	10/13/10	9,000	1,100	74	4	5	900	57	<1	15.0	2.7	<3.4	<2.7	9.3	4,190	<0.20	<8.9	<2.3	102
	11/08/10	13,000	1,900	230	4	5	1,500	97	<0.5	-	-	-	-	-	3,270	<0.20	-	-	-
	12/07/10	17,000	3,000	<360	4	6	940	140	<0.5	-	-	-	-	-	4,450	<0.20	-	-	-
	01/06/11	13,000	2,200	<350	3	4	1,000	67	<1	-	-	-	-	-	5,670	<0.20	-	-	-
	01/24/11	10,100	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.20	-	-	-
	03/02/11	15,000	3,500	<360	3	6	1,800	95	<3	-	-	-	-	-	13,100	<0.20	-	-	-
	03/16/11	12,000	5,600	<360	3	8	1,900	120	<1	-	-	-	-	-	10,900	<0.20	-	-	-
	03/24/11	10,900	2,400	<476	2.55	5.25	538	-	<5.00	23.8	<1.00	<2.00	2.09	12.1	6,800	<0.20	<1.00	<1.00	19.9
	04/05/11	10,700	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.20	-	-	-
dup	04/05/11	10,700	-	-	-	-	-	-	-	-	-	-	-	-	-	<0.20	-	-	-
	04/13/11	9,600	3,600	<72	2	6	900	69	<0.5	-	-	-	-						

**TABLE 7**  
**GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA CLUSTER WELLS - TPH, VOCs, AND METALS**  
 Willbridge Terminals  
 Portland, Oregon

Well Identification	Date Sampled	VOCs										Metals							
		TPH-G	TPH-D	TPH-O	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	Arsenic	Cadmium	Chromium	Copper	Lead	Manganese	Mercury	Selenium	Silver	Zinc
		(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	
<b>CR-28B</b>	01/31/06	<80.0	<b>236</b>	<0.472	<0.200	<0.400	<0.400	--	<0.400	<b>4.80</b>	<1.00	<b>4.31</b>	<b>5.50</b>	<b>2.12</b>	<b>4,220</b>	<0.20	<2.00	<1.00	<b>22.5</b>
	12/19/07	<80.0	<b>391</b>	<490	<0.200	<1.00	<1.00	<2.00	<1.00	<b>4.43</b>	<b>0.31</b>	<b>1.18</b>	<b>2.22</b>	<b>1.34</b>	-	<0.20	<1.60	<0.0970	<40.0
	03/27/08	<80.0	<b>428</b>	<500	<0.200	<1.00	<1.00	<2.00	<1.00	<b>3.68</b>	<0.380	<1.00	<b>5.46</b>	<b>0.611</b>	-	<0.20	<5.00	<0.120	<33.0
	06/25/08	<b>39.7</b>	<243	<485	<0.200	<1.00	<b>0.0800</b>	<3.00	<1.00	<b>3.83</b>	<b>0.127</b>	<2.00	<2.00	<1.00	<b>3,630</b>	<0.20	<0.500	<1.00	<b>2.30</b>
	09/25/08	<80.0	<245	<490	<0.200	<1.00	<b>0.150</b>	<3.00	<1.00	<b>4.38</b>	<5.00	<20.0	<20.0	<10.0	<b>3,850</b>	<0.20	<5.00	<10.0	<50.0
	01/08/09	<80.0	<245	<490	<0.200	<1.00	<1.00	-	<1.00	<b>3.91</b>	<b>0.398 J</b>	<b>0.549 J</b>	<b>3.73</b>	<b>1.13</b>	<b>4,150</b>	<0.20	<0.500	<1.00	<b>11.2</b>
	03/27/09	<80.0	<250	<500	<0.200	<1.00	<1.00	-	<1.00	<b>3.50</b>	<b>0.560</b>	<2.00	<2.00	<1.00	<b>3,720</b>	<0.20	<0.500	<1.00	<b>16.1</b>
	09/24/09	<80.0	<248	<495	<0.200	<1.00	<1.00	-	<1.00	<b>3.52</b>	<b>0.511</b>	<2.00	<2.00	<1.00	<b>3,740</b>	<0.20	<0.500	<1.00	<b>5.23</b>
	01/26/10	<50	<b>200</b>	<b>230</b>	<0.5	<0.5	<0.5	-	<0.5	-	-	-	-	-	<b>3,140</b>	<0.20	-	-	-
	03/26/10	-	-	-	-	-	-	-	-	<10.0	<b>4.83</b>	<2.00	<20.0	<1.00	<b>3,630</b>	<0.20	<1.00	<1.00	<10.0
	06/14/10	<50	<b>200</b>	<71	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	<b>3,710</b>	<0.20	-	-	-
	08/17/10	<50	<b>350</b>	<140	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	<b>3,820</b>	<0.20	-	-	-
	09/16/10	<50	<b>290</b>	<70	<0.5	<0.5	<0.5	<0.5	<0.5	-	-	-	-	-	<b>3,710</b>	<0.20	-	-	-
	10/14/10	<80.0	<100	<500	<0.200	<1.00	<1.00	-	<1.00	<b>3.72</b>	<1.00	<2.00	<2.00	<1.00	<b>3,200</b>	<0.20	<1.00	<1.00	<10.0
	03/24/11	<80.0	<95.2	<476	<0.200	<1.00	<1.00	-	<1.00	<b>3.86</b>	<1.00	<2.00	<2.00	<1.00	<b>4,330</b>	<0.20	<1.00	<1.00	<10.0
	10/04/11	<80.0	<100	<500	<0.200	<1.00	<1.00	-	<1.00	<b>5.09</b>	<1.00	<b>4.95</b>	<b>6.45</b>	<b>2.66</b>	<b>4,070</b>	<0.20	<1.00	<1.00	<b>24.0</b>
	09/28/12	<80.0	<b>630</b>	<39.0	<1.00	<1.00	<1.00	<3.00	<1.00	<10.0	<10.0	<20	<20	<10.0	<b>3,800</b>	<0.20	<10.0	<10.0	<100
	09/24/13	<80	<100	<260	<0.20	<0.50	<0.50	<1.0	<1.0	<b>4.1</b>	<1.0	<b>28</b>	<b>8.6</b>	<b>3.3</b>	<b>3,900</b>	<0.20	<1.0	<1.0	<b>36</b>
	09/09/14	<50	<b>350</b>	<240	<0.20	<0.50	<0.50	<1.0	<1.0	<b>4</b>	<1.0	<b>4.8</b>	<b>8.7</b>	<b>3.4</b>	<b>3,600</b>	<0.20	<1.0	<1.0	<b>47</b>
<b>CR-28C</b>	01/31/06	<80.0	<236	<472	<0.200	<0.400	<0.400	--	<0.400	<b>2.09</b>	<1.00	<b>3.20</b>	<b>7.17</b>	<b>2.42</b>	<b>499</b>	<0.20	<2.00	<1.00	<b>24.4</b>
	12/19/07	<80.0	<b>845</b>	<b>1,070</b>	<0.200	<1.00	<1.00	<2.00	<1.00	<0.360	<b>0.189</b>	<b>1.31</b>	<b>3.54</b>	<b>2.2</b>	-	<0.20	<1.60	<0.0970	<40.0
	03/27/08	<80.0	<243	<485	<0.200	<1.00	<1.00	<2.00	<1.00	<b>0.802</b>	<0.380	<1.00	<2.70	<b>1.68</b>	-	<0.20	<5.00	<0.120	<33.0
	06/25/08	<80.0	<243	<485	<0.200	<b>0.120</b>	<b>0.320</b>	<3.00	<1.00	<b>0.491</b>	<b>0.539</b>	<b>0.45</b>	<b>1.74</b>	<b>1.76</b>	<b>246</b>	<0.20	<0.500	<1.00	<b>29.3</b>
	09/25/08	<b>97.7</b>	<245	<490	<0.200	<1.00	<b>7.23</b>	<b>0.610</b>	<1.00	<b>0.826</b>	<0.500	<2.00	<b>1.01</b>	<b>0.429</b>	<b>400</b>	<0.20	<b>0.939</b>	<1.00	<b>5.89</b>
	01/08/09	<80.0	<245	<490	<0.200	<1.00	<1.00	-	<1.00	<b>0.984 J</b>	<b>0.708</b>	<b>0.981 J</b>	<b>4.95</b>	<b>1.95</b>	<b>431</b>	<0.20	<b>0.434 J</b>	<1.00	<b>23.4</b>
	03/27/09	<80.0	<250	<500	<0.200	<1.00	<1.00	-	<1.00	<1.00	<0.500	<2.00	<2.00	<1.00	<b>350</b>	<0.20	<0.500	<1.00	<5.00
	09/24/09	<80.0	<248	<495	<0.200	<1.00	<1.00	-	<1.00	<1.00	<b>0.886</b>	<2.00	<b>2.93</b>	<1.00	<b>242</b>	<0.20	<0.500	<1.00	<b>18.2</b>
	03/26/10	<80.0	<243	<485	<0.200	<1.00	<1.00	-	<1.00	<1.00	<b>1.11</b>	<b>2.88</b>	<b>4.52</b>	<b>2.87</b>	<b>224</b>	<0.20	<1.00	<1.00	<b>33.9</b>
	10/14/10	<80.0	<105	<526	<0.200	<1.00	<1.00	-	<1.00	<1.00	<1.00	<2.00	<b>3.59</b>	<b>1.55</b>	<b>164</b>	<0.20	<1.00	<1.00	<b>32.8</b>
	03/24/11	<80.0	<962	<481	<0.200	<1.00	<1.00	-	<1.00	<1.00	<1.00	<2.00	<b>2.83</b>	<b>1.33</b>	<b>392</b>	<0.20	<1.00	<1.00	<b

**TABLE 7**  
**GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA CLUSTER WELLS - TPH, VOCs, AND METALS**  
 Willbridge Terminals  
 Portland, Oregon

Well Identification	Date Sampled	VOCs										Metals							
		TPH-G	TPH-D	TPH-O	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	Arsenic	Cadmium	Chromium	Copper	Lead	Manganese	Mercury	Selenium	Silver	Zinc
		(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	
<b>CR 29A</b>	02/01/06	1,140	1,220	<485	<0.200	<0.400	11.9	--	<0.400	6.41	<1.00	18.2	23.3	10.6	2,560	<0.20	<2.00	<1.00	63.3
	12/18/07	1,720	1,350	<490	-	-	-	-	-	28.1	<1.00	67	110	45	-	<0.20	<2.00	<1.00	197
	03/27/08	627	721	<485	<0.200	<1.00	2.82	<2.00	<1.00	3.93	<0.380	<1.00	<2.70	<0.540	-	<0.20	<5.00	<0.120	<33.0
	06/26/08	2,070	837	<485	<0.200	0.350	5.05	1.18	<1.00	21.7	0.069	3.26	4.26	2.96	3,750	<0.20	0.0970	<1.00	13.0
	09/25/08	2,540	726	<490	<1.00	0.700	13.8	1.90	<5.00	33.2	<5.00	27.8	43.1	16.9	4,790	<0.20	1.49	<10.0	79.3
	01/08/09	1,970	752	<485	0.200 J	0.260 J	5.48	-	<2.00	24.6	<0.500	<2.00	1.42 J	<1.00	3,300	<0.20	<0.500	<1.00	5.70
	03/26/09	2,110	967	<495	<0.200	<1.00	4.06	-	<1.00	46.7	<0.500	13.8	18.0	8.35	3,920	<0.20	<0.500	<1.00	43.2
	09/24/09	1,950	1,040	<490	0.210	<1.00	2.08	-	<1.00	26.6	<0.500	<2.00	<2.00	5.46	3,720	<0.20	<0.500	<1.00	<5.00
	03/25/10	168	343	<500	<0.200	<1.00	<1.00	-	<1.00	25.7	<1.00	5.13	<20.0	7.58	2,100	<0.20	<1.00	<1.00	29.6
	10/01/10	2,870	551	<481	<0.400	<2.00	<2.00	-	<2.00	37.9	<10.0	<20.0	<20.0	<10.0	3,780	<0.20	<10.0	<10.0	<100
	03/25/11	540	142	<481	<0.200	<1.00	<1.00	-	<1.00	4.05	<1.00	<2.00	3.63	2.43	1,320	<0.20	<1.00	<1.00	17.6
	10/03/11	2,560	826	<500	<0.200	<1.00	1.35	-	<1.00	29.4	<1.00	<2.00	3.16	1.01	3,270	<0.20	<1.00	<1.00	<10.0
<b>CR 29B</b>	02/01/06	<80.0	<236	1490	<0.200	<0.400	<0.400	-	<0.400	6.30	<1.00	1.73	3.14	<1.00	4,070	<0.20	<2.00	<1.00	14.6
	09/21/07	-	-	-	-	-	-	-	-	7.06	<0.0752	3.79	10.1	3.20	5,440	<0.20	<1.60	<0.0970	28.6
	12/18/07	<80.0	<245	510	<0.200	<1.00	<1.00	<2.00	<1.00	4.44	<1.00	1.42	4.51	1.68	-	<0.20	<2.00	<1.00	27.6
	03/27/08	<80.0	<243	<485	<0.200	<1.00	<1.00	<2.00	<1.00	5.79	<0.380	1.49	<2.70	1.34	-	<0.20	<5.00	<0.120	<33.0
	06/26/08	<80.0	<243	<485	<0.200	<1.00	<1.00	<3.00	<1.00	8.23	0.179	3.40	5.72	3.93	4,500	<0.20	<0.500	<1.00	19.4
	09/25/08	<80.0	<245	<490	<0.200	<1.00	<1.00	<3.00	<1.00	15.7	<5.00	11.6	24.4	11.5	6,480	<0.20	0.900	<10.0	64.3
	01/08/09	<80.0	<240	<481	<0.200	<1.00	<1.00	-	<1.00	6.00	0.303 J	2.18	3.64	2.11	5,500	<0.20	0.333 J	<1.00	19.7
	03/26/09	<80.0	<250	<500	<0.200	<1.00	<1.00	-	<1.00	4.44	<0.500	<2.00	<2.00	<1.00	5,250	<0.20	<0.500	<1.00	6.48
	09/24/09	<80.0	<245	<490	<0.200	<1.00	<1.00	-	<1.00	9.33	<0.500	10.7	16.0	8.06	7,420	<0.20	0.597	<1.00	43.8
	03/25/10	<80.0	<243	<485	<0.200	<1.00	<1.00	-	<1.00	41.0	<1.00	51.1	86.2	41.8	7,930	<0.20	<1.00	<1.00	230
	10/01/10	<80.0	<97.1	<485	<0.200	<1.00	<1.00	-	<1.00	<10.0	<10.0	<20.0	<20.0	<10.0	5,170	<0.20	<10.0	<10.0	<100
	03/25/11	<80.0	<97.1	<485	<0.200	<1.00	<1.00	-	<1.00	4.21	<1.00	<2.00	<2.00	<1.00	4,600	<0.20	<1.00	<1.00	<10.0
<b>CR-30A</b>	02/01/06	302	1,420	<0.472	<0.200	<0.400	<0.400	--	<0.400	18.1	<1.00	23.6	35.4	22.4	3,460	<0.20	<2.00	<1.00	78.8
	12/20/07	370	1,550	<490	<0.200	<1.00	<1.00	<2.00	<1.00	15.6	<0.0752	11	10.3	4.59	-	<0.20	<1.60	<0.0970	<40.0
	03/26/08	92.7	595	<490	<0.200	<1.00	<1.00	<2.00	<1.00	9.43	<0.380	6.11	10.6	7.70	-	<0.20	<5.00	<0.120	<33.0
	06/26/08	566	986	<485	<0.200	<1.00	0.160	0.320	<1.00	20.9	0.366	23.6	39.9	23.7	3,400	<0.20	0.364	<1.00	86.5
	09/24/08	707	502	<480	0.09	0.140	0.370	0.360	<1.00	19.1	<5.00	10.0	18.6	8.71	3,450	<0.20	1.00	<10.0	33.0
	01/07/09	86.4	192,000 J	<500	<0.200	<1.00	<1.00	-	<1.00	3.92	0.220 J	4.23	6.71	3.89	541	<0.20	0.690	<1.00	17.8
	03/25/09	602	1,090	<556	<0.200	<1.00	<1.00	-	<1.00	10.5	<0.500	<20.0	2.66	1.87	2,200	<0.20	<0.500	<1.00	8.89
	09/23/09	971	1,150	<500	<0.200	<1.00	<1.00	-	<1.00	6.59	<0.500	<2.00	<2.00	<1.00	1,860	<0.20	<0.500	<1.00	<5.00
	03/25/																		

**TABLE 7**  
**GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA CLUSTER WELLS - TPH, VOCs, AND METALS**  
 Willbridge Terminals  
 Portland, Oregon

Well Identification	Date Sampled	VOCs										Metals							
		TPH-G	TPH-D	TPH-O	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	Arsenic	Cadmium	Chromium	Copper	Lead	Manganese	Mercury	Selenium	Silver	Zinc
		(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	
<b>CR-30B</b>	02/01/06	<80.0	<236	<0.472	<0.200	<0.400	<0.400	--	<0.400	<b>8.68</b>	<1.00	<1.00	<2.00	<1.00	<b>5,780</b>	<0.20	<2.00	<1.00	<b>11.9</b>
	12/20/07	<80.0	<245	<490	<0.200	<1.00	<1.00	<2.00	<1.00	-	-	-	<b>3.91</b>	-	-	<0.20	-	-	<40.0
	03/26/08	<80.0	<245	<490	<0.200	<1.00	<1.00	<2.00	<1.00	<b>13.0</b>	<0.380	<1.00	<b>9.59</b>	<0.540	-	<0.20	<5.00	<0.120	<33.0
	06/26/08	<80.0	<238	<476	<0.200	<1.00	<1.00	<3.00	<1.00	<b>10.9</b>	<b>0.101</b>	<2.00	<2.00	<1.00	<b>6,020</b>	<0.20	<0.500	<1.00	<b>2.67</b>
	09/24/08	<80.0	<245	<490	<0.200	<1.00	<1.00	<3.00	<1.00	<b>20.5</b>	<b>0.283</b>	<b>1.85</b>	<b>4.68</b>	<b>2.14</b>	<b>8,070</b>	<0.20	<b>1.38</b>	<1.00	<b>17.4</b>
	01/07/09	<80.0	<250,000	<500	<0.200	<1.00	<1.00	-	<1.00	<b>17.8</b>	<b>0.280 J</b>	<b>0.350 J</b>	<b>3.61</b>	<b>0.530 J</b>	<b>7,970</b>	<0.20	<b>0.0800 J</b>	<1.00	<b>9.56</b>
	03/25/09	<80.0	<250	<500	<0.200	<1.00	<1.00	-	<1.00	<b>17.8</b>	<0.500	<40.0	<2.00	<1.00	<b>7,620</b>	<0.20	<0.500	<1.00	<5.00
	09/23/09	<80.0	<250	<500	<0.200	<1.00	<1.00	-	<1.00	<b>12.1</b>	<0.500	<2.00	<b>2.17</b>	<1.00	<b>7,280</b>	<0.20	<0.500	<1.00	<b>39.8</b>
	03/25/10	<80.0	<b>311</b>	<500	<0.200	<1.00	<1.00	-	<1.00	<20.0	<1.00	<2.00	<40.0	<1.00	<b>8,250</b>	<0.20	<1.00	<1.00	<b>19.3</b>
	09/30/10	<80.0	<b>99.5</b>	<485	<0.200	<1.00	<1.00	-	<1.00	<b>18.5</b>	<10.0	<20.0	<20.0	<10.0	<b>7,900</b>	<0.20	<10.0	<10.0	<100
	03/25/11	<80.0	<95.2	<476	<0.200	<1.00	<1.00	-	<1.00	<b>17.6</b>	<1.00	<2.00	<2.00	<1.00	<b>9,550</b>	<0.20	<1.00	<1.00	<10.0
	09/28/12	<80.0	<b>290</b>	<530	<1.00	<1.00	<1.00	<3.00	<1.00	<b>33</b>	<10.0	<20	<20	<10.0	<b>8,700</b>	<0.20	<10.0	10	<100
	09/25/13	<80	<100	<260	<0.20	<0.50	<0.50	<1.0	<1.0	<b>26</b>	<b>1.3</b>	<b>5.6</b>	<b>2.0</b>	<b>1.1</b>	<b>8,600</b>	<0.20	<1.0	<1.0	<b>44</b>
	09/09/14	<50	<b>110</b>	<260	<0.20	<0.50	<0.50	<1.0	<1.0	<b>24</b>	<1.0	<2.0	<2.0	<b>1.4</b>	<b>7,700</b>	<0.20	<1.0	<1.0	<b>22</b>

**TABLE 7**  
**GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA CLUSTER WELLS - TPH, VOCs, AND METALS**  
 Willbridge Terminals  
 Portland, Oregon

Well Identification	Date Sampled	VOCs										Metals								
		TPH-G	TPH-D	TPH-O	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	Arsenic	Cadmium	Chromium	Copper	Lead	Manganese	Mercury	Selenium	Silver	Zinc	
		(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)		
<b>CR-31A</b>	01/18/06	<b>514</b>	<b>12,600</b>	0.490	0.200	<b>0.400</b>	<b>0.400</b>	<b>1.00</b>	<b>0.400</b>	<b>13.3</b>	<b>1.00</b>	<b>7.37</b>	<b>42.4</b>	<b>9.14</b>	<b>896</b>	<b>&lt;0.20</b>	<b>40.0</b>	<b>1.00</b>	<b>35.9</b>	
	12/19/07	<b>411</b>	<b>7,040</b>	873	<0.200	<1.00	<1.00	<2.00	<1.00	<b>14.5</b>	<0.0752	<b>5.39</b>	<b>6.2</b>	<b>2.88</b>	-	<0.20	<1.60	<0.0970	<40.0	
	03/26/08	<b>134</b>	<b>2,030</b>	<490	<0.400	<2.00	<2.00	<4.00	<2.00	<b>10.4</b>	<0.380	<1.00	<2.70	<b>0.550</b>	-	<0.20	<5.00	<0.120	<33.0	
	06/26/08	<b>697</b>	<b>5,080</b>	380	0.11	<b>0.130</b>	<1.00	<b>0.470</b>	<1.00	<b>8.04</b>	<b>0.091</b>	<b>5.97</b>	<b>8.34</b>	<b>3.98</b>	<b>1,630</b>	<0.20	<b>0.0840</b>	<b>0.586</b>	<b>19.7</b>	
	09/24/08	<b>328</b>	<b>4,230</b>	<b>292</b>	<0.400	<2.00	<2.00	<6.00	<2.00	<b>20.3</b>	<5.00	<20.0	<b>5.97</b>	<10.0	<b>2,530</b>	<0.20	<5.00	<10.0	<b>11.4</b>	
	01/07/09	<b>295</b>	<b>1,310,000</b>	<500	<0.400	<2.00	<2.00	-	<2.00	<b>6.66</b>	<b>0.100 J</b>	<b>0.730 J</b>	<b>1.39 J</b>	<b>0.450 J</b>	<b>1,170</b>	<0.20	<b>0.120 J</b>	<1.00	<b>4.83 J</b>	
	03/25/09	<b>490</b>	<b>13,700</b>	<b>865</b>	<0.200	<1.00	<1.00	-	<1.00	<b>11.8</b>	<2.50	<b>14.4</b>	<b>21.3</b>	<b>7.40</b>	<b>2,020</b>	<0.20	<0.500	<1.00	<b>45.7</b>	
	09/23/09	<b>288</b>	<b>10,500</b>	<b>757</b>	<0.200	<1.00	<1.00	-	<1.00	<b>9.67</b>	<0.500	<2.00	<2.00	<1.00	<b>1,760</b>	<0.20	<0.500	<1.00	<5.00	
	03/24/10	<b>184</b>	<b>1,050</b>	<485	<0.200	<1.00	<1.00	-	<1.00	<b>5.54</b>	<1.00	<2.00	<4.00	<1.00	<b>1,150</b>	<0.20	<1.00	<1.00	<b>15.0</b>	
	09/30/10	<b>192</b>	<b>6,780</b>	<481	<0.200	<1.00	<1.00	-	<1.00	<b>1.65</b>	<1.00	<2.00	<2.00	<1.00	<b>744</b>	<0.20	<1.00	<1.00	<10.0	
	03/25/11	<b>449</b>	<b>1,240</b>	<481	<0.200	<1.00	<1.00	-	<1.00	<b>9.04</b>	<1.00	<2.00	<2.00	<1.00	<b>1,540</b>	<0.20	<1.00	<1.00	<10.0	
	09/30/11	<b>188</b>	<b>700</b>	<556	<0.200	<1.00	<1.00	-	<1.00	<b>3.28</b>	<1.00	<2.00	<2.00	<1.00	<b>1.23</b>	<b>992</b>	<0.20	<1.00	<1.00	<b>10.6</b>
	09/28/12	<b>350</b>	<b>7,200</b>	<b>780</b>	<1.00	<1.00	<1.00	<3.00	<1.00	<b>5.7</b>	<5.0	<10.0	<b>11</b>	<5.0	<b>1,300</b>	<0.20	<5.0	<5.0	<50.0	
	09/25/13	<b>340</b>	<b>960</b>	<260	<0.20	<0.50	<0.50	<1.0	<1.0	<b>25</b>	<1.0	<b>48</b>	<b>50</b>	<b>14</b>	<b>2,900</b>	<0.20	<1.0	<1.0	<b>110</b>	
	09/04/14	<b>480</b>	<b>6,300</b>	<b>860</b>	<0.20	<0.50	<0.50	<1.0	<1.0	<b>8.3</b>	<1.0	<b>12</b>	<b>14</b>	<b>5.1</b>	<b>1,300</b>	<0.20	<1.0	<1.0	<b>31</b>	
<b>CR-31B</b>	02/01/06	<80.0	<236	<472	<0.200	<0.400	<0.400	--	<0.400	<b>26.3</b>	<1.00	<1.00	<2.00	<1.00	<b>5,130</b>	<0.20	<2.00	<1.00	<b>17.3</b>	
	12/20/07	<80.0	<243	<485	<0.200	<1.00	<1.00	<2.00	<1.00	-	-	-	<b>5.08</b>	-	-	<0.20	-	-	<40.0	
	03/26/08	<80.0	<245	<490	<0.200	<1.00	<1.00	<2.00	<1.00	<b>118</b>	<b>0.533</b>	<b>2.99</b>	<b>4.89</b>	<b>1.51</b>	-	<0.20	<5.00	<0.120	<33.0	
	06/26/08	<80.0	<243	<485	<0.200	<1.00	<1.00	<3.00	<1.00	<b>102</b>	<b>0.239</b>	<b>0.651</b>	<b>0.394</b>	<b>0.489</b>	<b>8,170</b>	<0.20	<0.500	<1.00	<b>13.3</b>	
	09/24/08	<80.0	<245	<490	<0.200	<1.00	<b>0.160</b>	<3.00	<1.00	<b>95.9</b>	<5.00	<20.0	<b>4.00</b>	<10.0	<b>8,650</b>	<0.20	<5.00	<10.0	<b>15.5</b>	
	01/07/09	<80.0	<250,000	<500	<0.200	<1.00	<1.00	-	<1.00	<b>120</b>	<b>1.71</b>	<b>6.26</b>	<b>11.1</b>	<b>3.48</b>	<b>10,500</b>	<0.20	<b>0.130 J</b>	<1.00	<b>17.5</b>	
	03/25/09	<80.0	<248	<495	<0.200	<1.00	<1.00	-	<1.00	<b>96.2</b>	<10.0	<40.0	<2.00	<b>1.05</b>	<b>10,700</b>	<0.20	<0.500	<1.00	<b>6.54</b>	
	09/23/09	<80.0	<248	<495	<0.200	<1.00	<1.00	-	<1.00	<b>80.6</b>	<0.500	<2.00	<2.00	<1.00	<b>11,500</b>	<0.20	<b>0.742</b>	<1.00	<b>15.3</b>	
	03/24/10	<80.0	<243	<485	<0.200	<1.00	<1.00	-	<1.00	<b>131</b>	<1.00	<2.00	<40.0	<1.00	<b>11,700</b>	<0.20	<1.00	<1.00	<10.0	
	09/30/10	<80.0	<96.2	<481	<0.200	<1.00	<1.00	-	<1.00	<b>129</b>	<20.0	<40.0	<40.0	<20.0	<b>12,100</b>	<0.20	<20.0	<20.0	<200	
	03/25/11	<80.0	<96.2	<481	<0.200	<1.00	<1.00	-	<1.00	<b>114</b>	<1.00	<2.00	<b>2.31</b>	<1.00	<b>10,500</b>	<0.20	<1.00	<1.00	<10.0	
	09/28/12	<80.0	<b>200</b>	<490	<1.00	<1.00	<1.00	<3.00	<1.00	<b>96</b>	<10.0	<20.0	<b>21</b>	<b>10</b>	<b>8,200</b>	<0.20	<10.0	<10.0	<100	
	9/25/13	<80	<100	<250	<0.20	<0.50	<0.50	<1.0	<1.0	<b>170</b>	<b>2.8</b>	<b>55</b>	<b>69</b>	<b>36</b>	<b>15,000</b>	<0.20	<1.0	<1.0	<b>200</b>	
	09/04/14	<50	<1000	<2500	<0.20	<0.50	<0.50	<1.0	<1.0	<b>140</b>	<b>1.9</b>	<b>37</b>	<b>43</b>	<b>24</b>	<b>13,000</b>	<0.20	<1.0	<1.0	<b>120</b>	

**TABLE 7**  
**GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA CLUSTER WELLS - TPH, VOCs, AND METALS**  
 Willbridge Terminals  
 Portland, Oregon

Well Identification	Date Sampled	VOCs										Metals							
		TPH-G	TPH-D	TPH-O	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	Arsenic	Cadmium	Chromium	Copper	Lead	Manganese	Mercury	Selenium	Silver	Zinc
		(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	
<b>CR-32A</b>	12/19/07	<b>90.2</b>	<b>3,280</b>	<b>1,110</b>	<1.00	<5.00	<5.00	<15.0	<5.00	<b>6.38</b>	<0.0752	<b>2.47</b>	<b>5.86</b>	<b>1.46</b>	-	<0.20	<1.60	<0.0970	<40.0
	03/26/08	<80.0	<b>662</b>	<490	<0.400	<2.00	<2.00	<4.00	<2.00	<b>3.52</b>	<0.380	<1.00	<2.70	<0.540	-	<0.20	<5.00	<0.120	<33.0
	06/26/08	<b>251</b>	<b>3,630</b>	483	<0.200	<1.00	<1.00	<3.00	<1.00	<b>3.40</b>	<0.500	<b>0.972</b>	<b>2.76</b>	<b>1.19</b>	<b>885</b>	<0.20	<b>0.105</b>	<1.00	<b>8.38</b>
	09/24/08	<b>132</b>	<b>3,050</b>	<b>305</b>	<0.400	<2.00	<2.00	<6.00	<2.00	<b>3.21</b>	<0.500	<b>1.36</b>	<b>3.92</b>	<b>0.928</b>	<b>1,110</b>	<0.20	<b>0.198</b>	<1.00	<b>9.55</b>
	01/07/09	<b>70.3 J</b>	<b>846,000</b>	<500	<0.400	<2.00	<2.00	-	<2.00	<b>6.22</b>	<0.500	<b>0.690 J</b>	<b>3.63</b>	<b>0.460 J</b>	<b>570</b>	<0.20	<b>0.130 J</b>	<1.00	<b>6.39</b>
	03/25/09	<80.0	<b>1,230</b>	<500	<0.200	<1.00	<1.00	-	<1.00	<b>2.16</b>	<0.500	<2.00	<2.00	<1.00	<b>617</b>	<0.20	<0.500	<1.00	<5.00
	09/23/09	<80.0	<b>1,440</b>	<495	<0.200	<1.00	<1.00	-	<1.00	<b>4.27</b>	<0.500	<2.00	<2.00	<1.00	<b>1,320</b>	<0.20	<0.500	<1.00	<5.00
	03/24/10	<b>84.5</b>	<b>1,290</b>	<485	<0.200	<1.00	<1.00	-	<1.00	<b>4.83</b>	<1.00	<2.00	<b>2.45</b>	<1.00	<b>558</b>	<0.20	<1.00	<1.00	<10.0
	09/30/10	<b>117</b>	<b>2,860</b>	<485	<0.400	<2.00	<2.00	-	<2.00	<b>2.96</b>	<2.00	<4.00	<4.00	<2.00	<b>1,340</b>	<0.20	<2.00	<2.00	<20.0
	03/25/11	<b>104</b>	<b>269</b>	<485	<0.200	<1.00	<1.00	-	<1.00	<b>1.23</b>	<1.00	<2.00	<b>2.35</b>	<1.00	<b>756</b>	<0.20	<1.00	<1.00	<10.0
	09/30/11	<80.0	<b>1,040</b>	<556	<0.200	<1.00	<1.00	-	<1.00	<b>1.04</b>	<1.00	<2.00	<b>2.48</b>	<1.00	<b>202</b>	<0.20	<1.00	<1.00	<10.0
	09/28/12	<160	<b>5,500</b>	1300	<2.0	<2.0	<2.0	<6.0	<2.0	<b>5.0</b>	<5.0	<10	<10	<5.0	<b>1,300</b>	<0.20	<5.0	<5.0	<50
	09/24/13	<80	<b>350</b>	<250	<0.20	<0.50	<0.50	<1.0	<1.0	<b>7.5</b>	<1.0	<b>5.1</b>	<b>12</b>	<b>1.1</b>	<b>1,200</b>	<0.20	<1.0	<1.0	<b>10</b>
	09/04/14	<b>66</b>	<b>6,200</b>	<b>1,900</b>	<0.20	<0.50	<0.50	<1.0	<1.0	<b>19.0</b>	<1.0	<2.0	<b>11</b>	<b>1.6</b>	<b>1,100</b>	<0.20	<1.0	<1.0	<b>11</b>
<b>CR-32B</b>	01/31/06	<80.0	<b>287</b>	<472	<0.200	<0.400	<0.400	--	<0.400	<b>25.3</b>	<1.00	<b>2.27</b>	<b>4.54</b>	<1.00	<b>7,670</b>	<0.20	<2.00	<1.00	<b>12.9</b>
	12/19/07	<80.0	<245	<490	<0.200	<1.00	<1.00	<2.00	<1.00	<b>52.3</b>	<b>0.403</b>	<b>31.1</b>	<b>8.25</b>	<b>1.4</b>	-	<0.20	<1.60	<0.0970	<40.0
	03/27/08	<80.0	<243	<485	<0.200	<1.00	<1.00	<2.00	<1.00	<b>31.5</b>	<b>0.381</b>	<1.00	<2.70	<0.540	-	<0.20	<5.00	<0.120	<33.0
	06/26/08	<80.0	<243	<485	<0.200	<1.00	<1.00	<3.00	<1.00	<b>62.4</b>	<b>0.411</b>	<b>0.597</b>	<b>1.37</b>	<b>0.891</b>	<b>9,280</b>	<0.20	<0.500	<1.00	<b>5.15</b>
	09/24/08	<80.0	<245	<490	<0.400	<2.00	<2.00	<6.00	<2.00	<b>57.6</b>	<5.00	<20.0	<b>3.05</b>	<10.0	<b>9,760</b>	<0.20	<5.00	<10.0	<b>7.83</b>
	01/08/09	<80.0	<245	<490	<0.200	<1.00	<1.00	-	<1.00	<b>39.1</b>	<b>0.115 J</b>	<2.00	<b>1.68 J</b>	<1.00	<b>10,700</b>	<0.20	<b>0.238 J</b>	<1.00	<b>3.14 J</b>
	03/25/09	<80.0	<248	<495	<0.200	<1.00	<1.00	-	<1.00	<b>26.7</b>	<10.0	<40.0	<2.00	<1.00	<b>9,020</b>	<0.20	<0.500	<1.00	<5.00
	09/23/09	<80.0	<248	<495	<0.200	<1.00	<1.00	-	<1.00	<b>66.2</b>	<0.500	<2.00	<2.00	<1.00	<b>9,380</b>	<0.20	<0.500	<1.00	<5.00
	03/24/10	<80.0	<243	<485	<0.200	<1.00	<1.00	-	<1.00	<b>57.8</b>	<1.00	<2.00	<40.0	<1.00	<b>9,490</b>	<0.20	<1.00	<1.00	<10.0
	09/30/10	<80.0	<96.2	<481	<0.200	<1.00	<1.00	-	<1.00	<b>64.0</b>	<20.0	<40.0	<40.0	<20.0	<b>9,910</b>	<0.20	<20.0	<20.0	<200
	03/25/11	<80.0	<95.2	<476	<0.200	<1.00	<1.00	-	<1.00	<b>67.8</b>	<1.00	<2.00	<b>2.53</b>	<1.00	<b>9,480</b>	<0.20	<1.00	<1.00	<10.0
	09/28/12	<80.0	<b>220</b>	<500	<1.00	<1.00	<1.00	<3.00	<1.00	<b>67</b>	<10.0	<20.0	<20.0	<10.0	<b>10,000</b>	<0.20	<10.0	<10.0	<100
	09/24/13	<80	<100	<260	<0.20	<0.50	<0.50	<1.0	<1.0	<b>67</b>	<1.0	<b>3.0</b>	<b>2.9</b>	<b>2.1</b>	<b>9,900</b>	<0.20	<1.0	<1.0	<b>13</b>
	09/04/14	<50	<b>620</b>	<270	<0.20	<0.50	<0.50	<1.0	<1.0	<b>79</b>	<1.0	<2.0	<2.0	<b>2.8</b>	<b>10,000</b>	<0.20	<1.0	<1.0	<b>11</b>

**TABLE 7**  
**GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA CLUSTER WELLS - TPH, VOCs, AND METALS**  
 Willbridge Terminals  
 Portland, Oregon

Well Identification	Date Sampled	VOCs										Metals							
		TPH-G	TPH-D	TPH-O	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	Arsenic	Cadmium	Chromium	Copper	Lead	Manganese	Mercury	Selenium	Silver	Zinc
		(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	
<b>CR-32C</b>	01/31/06	<80.0	<236	<472	<0.200	<0.400	<0.400	--	<0.400	<b>9.31</b>	<1.00	<b>10.4</b>	<b>21.4</b>	<b>9.63</b>	<b>1,400</b>	<0.20	<2.00	<1.00	<b>52.8</b>
	12/19/07	<80.0	<b>844</b>	<b>1,020</b>	<0.200	<1.00	<1.00	<2.00	<1.00	<b>8.21</b>	<b>0.13</b>	<b>4.03</b>	<b>8.89</b>	<b>4.08</b>	-	<0.20	<1.60	<0.0970	<b>46.1</b>
	03/26/08	<80.0	<245	<490	<0.200	<1.00	<1.00	<2.00	<1.00	<b>5.13</b>	<b>1.38</b>	<1.00	<b>3.95</b>	<b>2.37</b>	-	<0.20	<5.00	<0.120	<b>110</b>
	06/26/08	<80.0	<243	<485	<0.200	<1.00	<1.00	<3.00	<1.00	<b>3.40</b>	<b>1.38</b>	<b>0.588</b>	<b>1.97</b>	<b>2.20</b>	<b>771</b>	<0.20	<0.500	<1.00	<b>66.9</b>
	09/24/08	<80.0	<245	<490	<0.200	<1.00	<b>0.0800</b>	<3.00	<1.00	<b>10.2</b>	<b>0.082</b>	<b>6.44</b>	<b>17.0</b>	<b>12.3</b>	<b>1,120</b>	<0.20	<b>0.988</b>	<1.00	<b>27.9</b>
	01/07/09	<80.0	<250,000	<500	<0.200	<1.00	<1.00	-	<1.00	<b>6.15</b>	<b>0.440 J</b>	<b>1.03 J</b>	<b>4.44</b>	<b>1.80</b>	<b>961</b>	<0.20	<0.500	<1.00	<b>22.1</b>
	03/25/09	<80.0	<250	<500	<0.200	<1.00	<1.00	-	<1.00	<b>4.41</b>	<b>1.22</b>	<4.00	<2.00	<b>1.24</b>	<b>1,050</b>	<0.20	<0.500	<1.00	<b>13.2</b>
	09/23/09	<80.0	<248	<495	<0.200	<1.00	<1.00	-	<1.00	<b>1.98</b>	<0.500	<2.00	<b>2.76</b>	<b>1.20</b>	<b>252</b>	<0.20	<0.500	<1.00	<b>117</b>
	03/24/10	<80.0	<243	<485	<0.200	<1.00	<1.00	-	<1.00	<b>2.70</b>	<1.00	<2.00	<b>2.72</b>	<b>1.13</b>	<b>376</b>	<0.20	<1.00	<1.00	<b>110</b>
	09/30/10	<80.0	<96.2	<481	<0.200	<1.00	<1.00	-	<1.00	<b>2.70</b>	<1.00	<2.00	<b>2.59</b>	<1.00	<b>460</b>	<0.20	<1.00	<1.00	<b>47.5</b>
	03/25/11	<80.0	<96.2	<481	<0.200	<1.00	<1.00	-	<1.00	<b>1.62</b>	<b>1.15</b>	<2.00	<b>6.03</b>	<b>1.17</b>	<b>297</b>	<0.20	<1.00	<1.00	<b>365</b>
	09/28/12	<80.0	<b>190</b>	<500	<1.00	<1.00	<1.00	<3.00	<1.00	<b>11</b>	<5.0	<10.0	<b>16</b>	<b>6.1</b>	<b>1,300</b>	<0.20	<5.0	<5.0	<b>50</b>
	09/24/13	<80	<100	<250	<0.20	<0.50	<0.50	<1.0	<1.0	<b>20</b>	<1.0	<b>59</b>	<b>54</b>	<b>27</b>	<b>2,300</b>	<0.20	<1.0	<1.0	<b>160</b>
	09/04/14	<50	-	-	<0.20	<0.50	<0.50	<1.0	<1.0	<b>6.4</b>	<1.0	<b>3.0</b>	<b>5.3</b>	<b>2.5</b>	<b>780</b>	<0.20	<1.0	<1.0	<b>18</b>

**TABLE 7**  
**GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA CLUSTER WELLS - TPH, VOCs, AND METALS**  
 Willbridge Terminals  
 Portland, Oregon

Well Identification	Date Sampled	TPH		VOCs										Metals							
		TPH-G	TPH-D	TPH-O	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	Arsenic	Cadmium	Chromium	Copper	Lead	Manganese	Mercury	Selenium	Silver	Zinc		
		(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)		
<b>KINDER MORGAN</b>																					
<b>MW 41B</b>	01/23/08	<13	360	500	<0.14	<0.11	<0.13	<0.22	<0.20	9.03	0.115	2.55	3.00	1.22	-	0.03	0.2	0.019	14.6		
dup	01/23/08	<13	310	320	<0.14	<0.11	<0.13	<0.22	<0.20	9.22	0.096	3.03	4.2	1.82	-	0.03	0.2	0.018	14.7		
	03/25/08	<13	12	52	<0.14	0.13	<0.13	<0.33	<0.20	9.68	0.132	4.93	7.91	5.74	-	0.0099	<0.2	0.037	22.6		
	06/24/08	<250	14	59	0.060	0.11	<0.042	<0.0115	<0.070	8.73	0.085	3.62	5.29	2.64	2,050	0.00504	<0.2	0.036	13.8		
dup	06/24/08	<250	<11	29	<0.045	0.090	<0.042	<0.0115	<0.070	8.40	0.084	3.34	5.23	2.67	2,060	0.00451	0.6	0.030	13.3		
	09/23/08	<250	15	77	<0.50	<0.50	<0.50	<1.00	<0.50	5.65	0.084	1.42	3.68	2.59	1,120	0.00329	0.7	0.009	22.0		
	01/05/09	<80	<236	<472	<0.200	<1.00	<1.00	<1.00	<1.00	9.2	<0.500	<2.00	2.51	<1.00	1,980	0.00158	<0.500	<1.00	6.00		
<b>MW 41C</b>	01/23/08	36	1,100	620	0.23	0.30	<0.13	<0.22	<0.20	3.52	0.24	2.14	5.18	7.05	-	0.03	0.4	0.006	14.8		
	03/25/08	42	19	68	<0.14	0.11	<0.13	<0.33	<0.20	4.55	0.126	2.99	9.16	5.74	-	0.0107	<0.4	0.021	27.6		
	06/24/08	<250	20	86	0.050	0.070	<0.042	<0.0115	<0.070	5.50	0.088	4.17	10.5	6.17	1,180	0.00988	0.5	0.030	23.9		
	09/23/08	24	16	39	<0.50	<0.50	<0.50	<1.00	<0.50	2.91	0.076	2.89	5.22	6.17	1,120	0.00917	0.5	0.009	28.4		
	01/05/09	<80	<238	<476	<0.200	<1.00	<1.00	<1.00	<1.00	7.47	<0.500	8.76	11.6	2.95	1,480	0.00449	<0.500	<1.00	36.1		
<b>MW 42B</b>	01/23/08	<13	70	120	<0.14	<0.11	<0.13	<0.22	<0.20	25.6	0.11	7.44	9.72	5.46	-	0.03	0.2	0.062	17.7		
	03/25/08	<13	<12	58	<0.14	0.12	<0.13	<0.33	<0.20	26.5	0.168	8.1	9.27	5.82	-	0.0106	<0.2	0.054	18.7		
	06/24/08	<250	<11	55	<0.045	0.060	<0.042	<0.0115	<0.070	20.7	0.091	2.35	5.00	1.80	8,600	0.00477	<0.2	0.019	14.0		
	09/23/08	<250	16	42	<0.50	0.050	<0.50	<1.00	<0.50	15.4	0.036	0.91	2.69	1.07	8,160	0.00741	1.1	0.009	14.8		
	01/05/09	<80	<243	<485	<0.200	<1.00	<1.00	<1.00	<1.00	37.5	<0.500	<2.00	<2.00	<1.00	10,500	0.00457	0.827	<1.00	<5.00		
<b>MW 42C</b>	01/23/08	<13	450	520	2.3	0.78	<0.13	<0.22	<0.20	2.28	0.078	1.83	3.12	1.24	-	0.03	1.1	0.012	11.2		
	03/25/08	17	15	110	0.14	0.20	<0.13	<0.33	<0.20	1.97	0.086	3.89	10.7	5.88	-	0.006	<0.2	0.032	20.9		
	06/24/08	<250	14	78	0.050	0.060	<0.042	<0.0115	<0.070	1.09	0.068	0.800	4.32	3.12	784	0.00243	1.0	0.010	10.3		
	09/23/08	<250	25	120	<0.50	<0.50	<0.50	<1.00	<0.50	0.76	0.106	0.49	3.93	2.69	711	0.00177	0.4	0.009	10.7		
	01/05/09	<80	<245	<490	<0.200	<1.00	<1.00	<1.00	<1.00	<1.00	<0.500	<2.00	3.05	<1.00	676	0.00200	<0.500	<1.00	8.64		
dup	01/05/09	<80	<238	<476	<0.200	<1.00	<1.00	<1.00	<1.00	<1.00	<0.500	<2.00	2.25	<1.00	669	0.00107	<0.500	<1.00	<5.00		

**TABLE 7**  
**GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA CLUSTER WELLS - TPH, VOCs, AND METALS**  
 Willbridge Terminals  
 Portland, Oregon

Well Identification	Date Sampled	TPH		VOCs								Metals							
		TPH-G	TPH-D	TPH-O	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE	Arsenic	Cadmium	Chromium	Copper	Lead	Manganese	Mercury	Selenium	Silver	Zinc
		(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	
<b>PHILLIPS</b>																			
U-29B	01/29/08	<b>87.6</b>	<b>556</b>	<476	<0.200	<0.500	<0.500	<1.00	<2.00	<b>4.48</b>	<0.380	<b>29.1</b>	31.7	<b>7.94</b>	-	0.17	-	-	62.4
	03/26/08	<80.0	<b>430</b>	<490	<0.200	<0.500	<0.500	<1.00	<2.00	5.74	<1.00	<b>5.38</b>	7.38	2.57	-	<0.200	<2.00	<1.00	<b>16.6</b>
	06/25/08	<80.0	<236	<472	<0.200	<0.500	<0.500	<1.00	<2.00	5.77	<b>0.586</b>	<b>2.40</b>	<b>2.40</b>	1.24	<b>1,500</b>	<0.200	<0.500	<1.00	<b>9.87</b>
	09/24/08	<80.0	<243	<485	<0.200	<1.00	<1.00	<3.00	<1.00	<b>12.2</b>	<1.00	<b>56.5</b>	55.3	<b>15.3</b>	1,990	<0.200	<b>1.85</b>	<2.00	122
dup	09/24/08	<80.0	<243	<485	<0.200	<1.00	<1.00	<3.00	<1.00	9.45	<b>2.55</b>	<b>39.5</b>	39.7	<b>10.8</b>	1,890	<0.200	<b>1.62</b>	<2.00	99.9
	01/07/09	<80.0	<250	<500	<0.200	<1.00	<1.00	<3.00	<1.00	6.04	<b>5.71</b>	13.3	15.9	<b>8.20</b>	1,320	<0.200	<b>0.590</b>	<1.00	64
	09/17/09	<80.0	<250	<500	<0.200	<1.00	<1.00	<3.00	<1.00	-	-	-	-	-	-	-	-	-	
U-29C	01/29/08	<80.0	<b>516</b>	<476	<b>0.310</b>	<0.500	<0.500	<1.00	<2.00	84.9	<3.80	<b>22.4</b>	<b>46.2</b>	<5.40	-	<0.005	-	-	305
	03/26/08	<80.0	<245	<490	<0.200	<0.500	<0.500	<1.00	<2.00	7.71	<1.00	<b>3.67</b>	5.76	<b>7.2</b>	-	<0.200	<2.00	<1.00	<b>25.4</b>
	06/25/08	<80.0	<236	<472	<0.200	<0.500	<0.500	<1.00	<2.00	3.25	<0.500	<2.00	<2.00	<1.00	<b>1,660</b>	<0.200	<0.500	<1.00	<b>24.6</b>
	09/23/08	<80.0	<238	<476	<0.200	<1.00	<1.00	<3.00	<1.00	<b>12.1</b>	<5.00	<20.0	<b>31.0</b>	<b>8.08</b>	<b>1,830</b>	<0.200	<5.00	<1.00	64
	01/07/09	<80.0	<250	<500	<0.200	<1.00	<1.00	<3.00	<1.00	3.66	<0.500	<2.00	<2.00	1.54	<b>1,350</b>	<0.200	<0.500	<1.00	<b>21.7</b>
<b>Portland Harbor Joint Source Control Screening Level Values (ug/L)</b>																			
EPA's 2004 NRWQC (organism only)	-	-	-	51	15000	2100	-	-	0.14	-	-	-	-	-	100	-	4200	-	26,000
DEQ's 2004 AWQC (organism only)	-	-	-	51	15,000	2,100	-	-	0.14	-	-	-	-	-	100	0.146	4,200	-	26,000
EPA's 2004 NRWQC ecological receptors (chronic)	-	-	-	-	-	-	-	-	150	0.094	-	2.7	0.54	-	0.77	5	-	36	
DEQ's 2004 AWQC ecological receptors (chronic)	-	-	-	-	-	-	-	-	-	0.38	-	3.6	0.54	-	0.012	35	0.12	33	
Oak Ridge National Lab (Tier II SCV)	-	-	-	130	9.8	7.3	-	-	3.1	-	-	-	-	-	120	1.3	-	0.36	-

**NOTES:**

Data collected prior to 4Q11 are presented as they were reported by previous consultants

J=result is less than reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value

B=compound was found in the blank sample

\*=Relative Percent was difference lab control sample and lab control sample duplicate exceed the control limits

µg/l = micrograms per Liter

<0.00985 = Analyte not detected above the laboratory method reporting limit (MRL) of 0.00985 µg/L

Screening Level Values (SLVs) taken from Table 3-1 of the Portland Harbor Joint Source Control Strategy (JSCS) guidance document, dated December 2005.

DEQ = Oregon Department of Environmental Quality

EPA = United States Environmental Protection Agency

NRWQC = National Recommended Water Quality Criteria

AWQC = Ambient Water Quality Criteria

**Shading** indicates analyte detections or laboratory MRLs were above the most stringent applicable screening levels presented in Table 3-1 of the Portland Harbor JSCS guidance document, dated December 2005 and revised in July 2007.

**Bold** face font indicates analyte was detected above the laboratory MRL or MDL

- = Not analyzed, not applicable

NS = Not sampled

N/A = Not applicable

TPH = Total Petroleum Hydrocarbons in the gasoline range (TPH-G), diesel range (TPH-D), and heavy oil range (TPH-O)

VOCs = Volatile Organic Compounds

**TABLE 8**  
**GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA CLUSTER WELLS - PAHs**  
 Willbridge Terminals  
 Portland, Oregon

Well Identification	Date Sampled	2-Methyl-naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo (a) anthracene	Benzo (a) pyrene	Benzo (b) fluoranthene	Benzo (g,h,i) perylene	Benzo (k) fluoranthene	Chrysene	Dibenzo (a,h) anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
<b>CHEVRON</b>																		
B-19	03/20/03	-	<b>1.69</b>	ND	ND	ND	ND	ND	ND	ND	ND	ND	<b>5.44</b>	ND	ND	<b>6.62</b>	ND	
	09/29/03	-	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	<b>9.68</b>	ND	ND	13.2	ND	
	03/29/04	-	<b>2.12</b>	<1.00	<1.00	<1.00	<b>0.0213</b>	<0.0200	<0.0200	<1.00	<0.0200	<1.00	<b>7.01</b>	<0.0200	<3.50	<b>11.9</b>	<1.00	
	03/09/05	-	<b>2.4</b>	<1.00	<b>0.973</b>	<0.500	<0.500	<0.500	<0.500	<0.500	<0.500	<1.00	<0.500	<b>8.85</b>	<0.500	<3.00	<b>16</b>	<b>0.537</b>
	06/22/05	-	<b>2.96</b>	<2.00	<b>0.849</b>	<0.100	<0.100	<0.100	<0.100	<0.100	<b>0.141</b>	<0.200	<0.300	<b>9.59</b>	<0.100	<2.50	<b>15.8</b>	<b>0.277</b>
	09/22/05	-	<1.34	<0.396	<0.297	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.198	<0.149	<b>4.14</b>	<0.0990	<1.98	<b>6.4</b>	<b>0.209</b>	
	03/25/08	<0.294	<b>1.76</b>	<0.980	<b>0.466</b>	<0.00980	<0.0245	<0.0245	<0.0980	<0.0245	<0.00980	<0.196	<b>5.45</b>	<0.0245	<0.882	<b>7.68</b>	<b>0.131</b>	
	06/26/08	<0.952	<b>2.83</b>	<0.952	<3.81	<b>0.0473</b>	<b>0.0235</b>	<b>0.0193</b>	<0.0952	<b>0.0117</b>	<b>0.118</b>	<b>0.00480</b>	<0.952	<b>8.35</b>	<b>0.0154</b>	<2.86	18.7	<b>0.322</b>
	03/18/09	<0.985	<b>1.59</b>	<0.985	<0.985	<b>0.0132</b>	<b>0.00630</b>	<0.00493	<0.0985	<0.00493	<b>0.0397</b>	<0.00493	<0.985	<b>5.41</b>	<0.00493	<0.985	<b>7.71</b>	<b>0.234</b>
dup	03/18/09	<0.485	<b>1.69</b>	<0.971	<1.46	<b>0.0403</b>	<b>0.0187</b>	<b>0.0130</b>	<0.0971	<b>0.0115</b>	<b>0.103</b>	<0.00485	<0.485	<b>9.63</b>	<b>0.0114</b>	<1.21	11.4	<b>0.591</b>
	09/15/09	<0.194	<b>2.07</b>	<1.94	<0.680	0.0228	<0.00971	<0.00971	<0.194	<0.00971	0.0638	<0.00971	<0.194	<b>5.90</b>	<0.00971	<2.00	<b>10.5</b>	<b>0.232</b>
	03/23/10	<0.957	<b>1.71</b>	<0.957	<0.957	<b>0.0120</b>	<b>0.00512</b>	<0.00478	<0.0957	<0.00478	0.0303	<0.00478	<0.957	<b>5.88</b>	<0.00478	<4.00	<b>6.43</b>	<0.191
	09/22/10	<0.500	<b>1.45</b>	<0.500	<0.750	0.0412	<0.0250	<0.0250	<0.500	<0.0250	0.0890	<0.0250	<0.500	<b>4.41</b>	<0.0250	<4.00	<b>5.98</b>	<0.500
dup	09/22/10	<0.400	<b>1.57</b>	<0.400	<0.800	0.0260	<0.0200	<0.0200	<0.400	<0.0200	0.0561	<0.0200	<0.400	<b>3.95</b>	<0.0200	<4.00	<b>5.69</b>	<b>0.193</b>
	03/22/11	<0.481	<b>1.41</b>	<0.481	<0.481	<b>0.0125</b>	<b>0.0127</b>	<b>0.00875</b>	<0.0962	<b>0.0107</b>	0.0288	<0.00481	<0.481	<b>3.71</b>	<b>0.00815</b>	<2.00	<b>5.67</b>	<b>0.127</b>
	09/30/11	<0.291	<b>1.19</b>	<0.291	<0.291	<0.0146	<0.0146	<0.0146	<0.291	<0.0146	<0.0146	<0.291	<b>2.62</b>	<0.0146	<2.00	<b>3.40</b>	<0.291	
	04/05/12	<0.97	<b>2.30</b>	<0.97	<b>0.57</b>	<0.049	<0.049	<0.049	<0.97	<0.049	0.091	<0.049	<0.97	<b>7.20</b>	<0.049	<4.9	<b>7.50</b>	<0.97
dup	04/05/12	<0.98	<b>2.00</b>	<0.98	<0.98	<0.049	<0.049	<0.049	<0.98	<0.049	0.07	<0.049	<0.98	<b>6.10</b>	<0.049	<4.9	<b>5.10</b>	<0.98
	10/01/12	<0.098	<b>0.19</b>	<0.098	<0.098	<0.0049	<0.0049	<0.0049	<0.098	<0.0049	<b>0.0078</b>	<0.0049	<0.0049	<b>0.27</b>	<0.0049	<0.98	<0.098	<0.098
dup	10/01/12	<0.096	<b>0.27</b>	<0.096	<0.096	<0.0048	<0.0048	<0.0048	<0.096	<0.0048	<b>0.0076</b>	<0.0048	<0.096	<b>0.38</b>	<0.0048	<0.96	<0.096	<0.096
	04/01/13	<0.50	<b>1.40</b>	<0.50	<0.50	<b>0.019</b>	<0.025	<0.025	<0.099	<0.025	<b>0.047</b>	<0.0050	<0.50	<b>4.80</b>	<b>0.0062</b>	<2.0	<b>4.8</b>	0.34
	09/16/13	<2.1	<b>&lt;2.1</b>	<2.1	<5.2	<b>&lt;0.021</b>	<0.021	<0.021	<0.41	<0.021	<b>0.028</b>	<0.021	<5.2	<b>4.50</b>	<0.021	<4.1	<b>&lt;5.2</b>	<0.41
	03/17/14	<0.50	<b>1.3</b>	<0.50	<2.0	<b>0.012</b>	<b>0.0068</b>	<b>0.007</b>	<0.10	<0.0050	<b>0.019</b>	<0.0050	<0.10	<b>2.9</b>	<b>0.0051</b>	<2.0	<b>4.1</b>	<b>0.19</b>
	09/08/14	<0.11	<b>0.82</b>	<0.22	<b>0.42</b>	<0.0054	<0.0054	<0.0054	<0.11	<0.0054	<b>0.0075</b>	<0.0054	<0.11	<b>1.2</b>	<0.0054	<0.81	<b>3.1</b>	<0.11
	09/14/15	<0.22	<b>1.5</b>	<0.85	<0.042	<0.17	<0.017	<0.017	<0.017	<0.017	<0.17	<0.017	<0.11	<b>2.6</b>	<0.017	<b>0.4</b>	2.7	<b>0.14</b>

**TABLE 8**  
**GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA CLUSTER WELLS - PAHs**  
 Willbridge Terminals  
 Portland, Oregon

Well Identification	Date Sampled	2-Methyl-naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo (a) anthracene	Benzo (a) pyrene	Benzo (b) fluoranthene	Benzo (g,h,i) perylene	Benzo (k) fluoranthene	Chrysene	Dibenzo (a,h) anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
B-26	03/30/04	-	<b>0.778</b>	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<b>0.299</b>	<b>0.649</b>	<0.200	<b>27.5</b>	<b>1.08</b>	<b>0.447</b>	
	03/09/05	-	<b>0.778</b>	<0.100	<0.100	<0.100	<0.100	<b>0.14</b>	<0.100	<0.100	<0.100	<b>0.236</b>	<b>0.421</b>	<0.100	<b>5.37</b>	<b>0.912</b>	<b>0.371</b>	
	06/22/05	-	<b>0.651</b>	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.200	<0.400	<b>0.264</b>	<b>0.588</b>	<0.200	<b>10.9</b>	<b>0.639</b>	<b>0.293</b>	
	09/22/05	-	<b>0.841</b>	<0.149	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.198	<b>0.161</b>	<b>0.44</b>	<0.0990	<b>7.8</b>	<b>0.701</b>	<b>0.224</b>	
	09/26/06	-	<b>0.499</b>	<0.495	<0.495	<0.495	<0.495	<0.495	<0.495	<0.495	<0.495	<0.495	<b>1.79</b>	<0.495	<b>177</b>	<b>1.08</b>	<0.495	
	12/18/07	<b>12.9</b>	<b>0.549</b>	<0.976	<0.976	<b>0.0938</b>	<b>0.0810</b>	<b>0.179</b>	<0.976	<b>0.136</b>	<b>0.190</b>	<0.0488	<0.976	<b>1.51</b>	<b>0.108</b>	<b>137</b>	<b>1.30</b>	<0.976
	03/26/08	<b>20.7</b>	<b>0.586</b>	<0.490	<0.490	<b>0.0349</b>	<b>0.0307</b>	<b>0.0616</b>	<0.490	<b>0.0490</b>	<b>0.0677</b>	<0.0245	<0.490	<b>0.824</b>	<b>0.0476</b>	<b>359</b>	<b>0.741</b>	<0.490
dup	03/26/08	<b>17.9</b>	<b>0.584</b>	<0.488	<0.488	<b>0.0326</b>	<b>0.0273</b>	<b>0.0573</b>	<0.488	<b>0.0437</b>	<b>0.0614</b>	<0.0244	<0.488	<b>0.776</b>	<b>0.0387</b>	<b>85.2</b>	<b>0.723</b>	<0.488
	06/26/08	<b>1.87</b>	<b>0.412</b>	<0.190	<0.190	<b>0.0407</b>	<b>0.0301</b>	<b>0.0603</b>	<0.190	<b>0.0415</b>	<b>0.0763</b>	<b>0.0130</b>	<b>0.163</b>	<b>0.324</b>	<b>0.0399</b>	<b>43.3</b>	<b>0.357</b>	<b>0.218</b>
	01/09/09	<b>7.79</b>	<b>0.436</b>	<0.488	<0.488	<b>0.0999</b>	<b>0.0754</b>	<b>0.124</b>	<0.488	<b>0.0920</b>	<b>0.161</b>	<0.0244	<b>0.274</b>	<b>0.647</b>	<b>0.0766</b>	<b>126</b>	<b>0.686</b>	<0.488
	03/27/09	<b>15.0</b>	<b>0.716</b>	<0.194	<0.194	<b>0.0602</b>	<b>0.0491</b>	<b>0.0832</b>	<0.194	<b>0.0617</b>	<b>0.103</b>	<b>0.0193</b>	<b>0.206</b>	<b>1.00</b>	<b>0.0543</b>	<b>72.6</b>	<b>0.970</b>	<b>0.423</b>
	09/22/09	<b>8.93</b>	<b>0.958</b>	<0.421	<0.421	<b>0.0637</b>	<b>0.0453</b>	<b>0.0771</b>	<0.421	<b>0.0560</b>	<b>0.114</b>	<0.0211	<0.421	<b>1.34</b>	<b>0.0449</b>	<b>78.3</b>	<b>1.24</b>	<0.421
	03/25/10	<b>4.74</b>	<b>0.565</b>	<0.383	<0.383	<b>0.0488</b>	<b>0.0337</b>	<b>0.0455</b>	<0.383	<b>0.0383</b>	<b>0.0648</b>	<0.0191	<0.383	<b>0.585</b>	<b>0.0307</b>	<b>78.0</b>	<b>0.443</b>	<0.383
dup	03/25/10	<b>4.45</b>	<b>0.690</b>	<0.383	<0.383	<b>0.0371</b>	<b>0.0252</b>	<b>0.0340</b>	<0.383	<b>0.0289</b>	<b>0.0522</b>	<0.0191	<0.383	<b>0.696</b>	<b>0.0222</b>	<b>75.9</b>	<b>0.435</b>	<0.383
	09/29/10	<b>1.31</b>	<b>0.466</b>	<0.100	<0.100	<b>0.0469</b>	<b>0.0381</b>	<b>0.0541</b>	<0.100	<b>0.0570</b>	<b>0.0710</b>	<b>0.0110</b>	<b>0.169</b>	<b>0.374</b>	<b>0.0342</b>	<b>141</b>	<b>0.293</b>	<b>0.314</b>
dup	09/29/10	<b>2.97</b>	<b>0.616</b>	<0.300	<0.100	<b>0.0214</b>	<b>0.0194</b>	<b>0.0247</b>	<0.100	<b>0.0229</b>	<b>0.0341</b>	<b>0.00545</b>	<b>0.113</b>	<b>0.761</b>	<b>0.0165</b>	<b>146</b>	<b>0.320</b>	<b>0.171</b>
	03/24/11	<b>6.18</b>	<b>0.551</b>	<0.476	<0.476	<0.0238	<0.0238	<b>0.0277</b>	<0.476	<0.0238	<b>0.0277</b>	<0.0238	<0.476	<b>0.492</b>	<0.0238	<b>109</b>	<0.476	<0.476
	10/03/11	<b>6.03</b>	<b>0.213</b>	<0.0985	<0.0985	<b>0.00577</b>	<0.00493	<b>0.00635</b>	<0.0985	<b>0.00521</b>	<b>0.00922</b>	<0.00493	<0.0985	<b>0.334</b>	<0.00493	<b>179</b>	<b>0.293</b>	<0.0985
	10/01/12	<b>3.4</b>	<b>0.33</b>	<0.19	<0.19	<b>0.012</b>	<0.0097	<b>0.014</b>	<0.19	<b>0.012</b>	<b>0.017</b>	<0.0097	<0.19	<b>0.43</b>	<b>0.014</b>	<b>31</b>	<b>0.26</b>	<0.19
dup	10/01/12	<b>2.8</b>	<b>0.21</b>	<0.097	<0.097	<b>0.011</b>	<b>0.0067</b>	<b>0.011</b>	<0.097	<b>0.009</b>	<b>0.019</b>	<0.0049	<0.097	<b>0.25</b>	<b>0.0095</b>	<b>18</b>	<b>0.2</b>	<b>0.13</b>
	09/24/13	<b>2.1</b>	<b>0.40</b>	<0.29	<0.29	<b>0.023</b>	<b>0.0095</b>	<b>0.016</b>	<0.097	<b>0.013</b>	<b>0.031</b>	<b>0.0072</b>	<0.29	<b>0.29</b>	<b>0.013</b>	<b>9.4</b>	<0.29	<b>0.21</b>
dup	09/24/13	<b>1.3</b>	<b>0.49</b>	<0.29	<0.29	<b>0.024</b>	<b>0.012</b>	<b>0.018</b>	<0.096	<b>0.016</b>	<b>0.032</b>	<0.0048	<0.29	<b>0.31</b>	<b>0.012</b>	<b>7.8</b>	<b>0.3</b>	<b>0.27</b>
	09/09/15	<b>0.4</b>	<b>0.28</b>	<b>0.022*</b>	<0.028*	<b>0.025</b>	<0.011*	<b>0.023</b>	<0.011	<0.011	<b>0.023</b>	<0.011	<b>0.093</b>	<b>0.095</b>	<b>0.011</b>	<b>0.53</b>	<0.11	<b>0.18</b>

**TABLE 8**  
**GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA CLUSTER WELLS - PAHs**  
 Willbridge Terminals  
 Portland, Oregon

Well Identification	Date Sampled	2-Methyl-naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo (a) anthracene	Benzo (a) pyrene	Benzo (b) fluoranthene	Benzo (g,h,i) perylene	Benzo (k) fluoranthene	Chrysene	Dibenzo (a,h) anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
B-33	03/20/03	-	<b>0.589</b>	ND	ND	ND	<b>0.385</b>	<b>0.37</b>	ND	<b>0.306</b>	ND	<b>0.449</b>	<b>2.01</b>	<b>0.3</b>	ND	<b>0.914</b>	<b>0.458</b>	
	09/30/03	-	<b>11</b>	ND	<b>3.3</b>	<b>8.28</b>	<b>19.2</b>	<b>44</b>	<b>37.5</b>	<b>26.4</b>	<b>34.1</b>	<b>7.35</b>	<b>20.2</b>	<b>33.3</b>	<b>30.6</b>	ND	<b>39.7</b>	<b>29.5</b>
	03/30/04	-	<b>3.03</b>	<2.00	<b>2.42</b>	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<2.00	<b>12.5</b>	<2.00	<4.50	<b>13.6</b>	<b>3.28</b>
	03/09/05	-	<b>2.42</b>	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<2.00	<1.00	<b>9.36</b>	<1.00	<2.00	<b>10.6</b>	<b>1.07</b>
	06/22/05	-	<b>3</b>	<1.50	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<2.00	<1.00	<b>10</b>	<1.00	<2.00	<b>10.2</b>	<1.00
	09/22/05	-	<b>2.56</b>	<0.990	<1.49	<0.990	<0.990	<0.990	<0.990	<0.990	<0.990	<1.98	<0.990	<b>8.31</b>	<0.990	<1.98	<b>6.82</b>	<0.990
	03/15/06	-	<b>1.08</b>	<0.308	<0.154	<b>0.153</b>	<b>0.233</b>	<b>0.27</b>	<b>0.286</b>	<b>0.292</b>	<b>0.4</b>	<b>0.0854</b>	<b>0.336</b>	<b>2.94</b>	<b>0.27</b>	<0.615	<b>2.45</b>	<b>0.533</b>
	03/27/08	<0.190	<b>1.22</b>	<0.952	<0.190	<0.0476	<0.0476	<0.0476	<0.952	<0.0476	<b>0.056</b>	<0.0476	<0.190	<b>3.38</b>	<0.0476	<1.14	<b>1.45</b>	<0.190
	06/26/08	<0.476	<b>1.28</b>	<0.476	<0.476	<b>0.0855</b>	<b>0.0864</b>	<b>0.148</b>	<0.476	<b>0.098</b>	<b>0.208</b>	<b>0.0307</b>	<b>0.450</b>	<b>2.93</b>	<b>0.0955</b>	<0.952	<b>2.86</b>	<b>0.475</b>
	03/18/09	<1.94	<b>3.17</b>	<1.94	<1.94	<b>0.418</b>	<b>0.370</b>	<b>0.615</b>	<1.94	<b>0.505</b>	<b>1.01</b>	<b>0.111</b>	<b>2.14</b>	<b>12.7</b>	<b>0.363</b>	<1.94	<b>13.5</b>	<b>3.22</b>
	09/22/09	<0.0980	<0.0980	<0.0980	<0.0980	<b>0.00748</b>	<b>0.0115</b>	<b>0.0103</b>	<0.0980	<b>0.00990</b>	<b>0.0109</b>	<0.00490	<0.0980	<0.0980	<b>0.00892</b>	<0.0980	<0.0980	<0.0980
	03/19/10	<0.0957	<0.0957	<0.0957	<0.0957	<b>0.00733</b>	<b>0.00888</b>	<b>0.00828</b>	<0.0957	<b>0.00714</b>	<b>0.00984</b>	<0.00478	<0.0957	<0.0957	<b>0.00741</b>	<0.0957	<0.0957	<0.0957
	09/21/10	<0.100	<0.100	<0.100	<0.100	<b>0.00750</b>	<b>0.00932</b>	<b>0.00872<sup>12</sup></b>	<0.100	<b>0.00638<sup>12</sup></b>	<b>0.00833<sup>12</sup></b>	<0.00500	<0.100	<0.100	<b>0.00944<sup>12</sup></b>	<0.100	<0.100	<0.100
	03/23/11	<0.0952	<0.0952	<0.0952	<0.0952	<b>0.00871</b>	<b>0.0123</b>	<b>0.0121</b>	<0.0952	<b>0.0109</b>	<b>0.0124</b>	<0.00476	<0.0952	<0.0952	<b>0.00972</b>	<0.0952	<0.0952	<0.0952
dup	03/22/11	<0.388	<b>1.18</b>	<0.388	<0.194	<b>0.0468</b>	<b>0.0635</b>	<b>0.0803</b>	<0.0971	<b>0.0796</b>	<b>0.0911</b>	<b>0.0181</b>	<b>0.254</b>	<b>2.08</b>	<b>0.0524</b>	<2.00	<b>1.36</b>	<b>0.310</b>
	09/30/11	<0.194	<b>0.975</b>	<0.194	<0.194	<b>0.0225</b>	<b>0.0222</b>	<b>0.0411</b>	<0.194	<b>0.0352</b>	<b>0.0505</b>	<0.00971	<0.194	<b>2.10</b>	<b>0.0288</b>	<2.00	<b>1.79</b>	<b>0.239</b>
dup	09/30/11	<0.194	<b>1.39</b>	<0.388	<0.194	<b>0.0547</b>	<b>0.0642</b>	<b>0.0752</b>	<0.194	<b>0.0723</b>	<b>0.0985</b>	<b>0.0219</b>	<b>0.304</b>	<b>3.03</b>	<b>0.0616</b>	<2.00	<b>2.58</b>	<b>0.334</b>

**TABLE 8**  
**GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA CLUSTER WELLS - PAHs**  
 Willbridge Terminals  
 Portland, Oregon

Well Identification	Date Sampled	2-Methyl-naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo (a) anthracene	Benzo (a) pyrene	Benzo (b) fluoranthene	Benzo (g,h,i) perylene	Benzo (k) fluoranthene	Chrysene	Dibenzo (a,h) anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene	
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	
<b>CR-3</b>	03/09/05	-	<0.100	<0.100	<0.100	<0.100	<b>0.0214</b>	<b>0.0269</b>	<b>0.0261</b>	<0.100	<b>0.0206</b>	<b>0.0333</b>	<0.00952	<0.190	<0.190	<b>0.0187</b>	<0.190	<0.190	<0.190
	06/22/05	-	<0.100	<0.100	<0.100	<0.100	<0.0990	<0.0990	<0.0990	<0.100	<0.100	<0.198	<0.0990	<0.0990	<0.0990	<0.0990	<0.100	<0.100	<0.100
	09/22/05	-	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.100	<0.100	<0.200	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100
	12/19/07	<0.190	<0.190	<0.190	<0.190	<b>0.0214</b>	<b>0.0269</b>	<b>0.0261</b>	<0.190	<b>0.0206</b>	<b>0.0333</b>	<0.00952	<0.190	<0.190	<b>0.0187</b>	<0.190	<0.190	<0.190	<0.190
	03/27/08	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.0952	<0.00476	<0.0952	<0.0952	<0.0952	<0.0952
	06/26/08	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.0952	<0.00476	<0.0952	<0.0952	<0.0952	<0.0952
	09/26/08	<0.0962	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.0962	<0.00481	<0.0962	<0.0962	<0.0962	<0.0962
	01/08/09	<0.0971	<0.0971	<0.0971	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	<0.0971	<0.00485	<2.00	<0.0971	<0.0971	<0.0971
	03/26/09	<0.0971	<0.0971	<0.0971	<0.0971	<b>0.00662</b>	<b>0.00635</b>	<b>0.00655</b>	<0.0971	<b>0.00505</b>	<b>0.0107</b>	<0.00485	<0.0971	<0.0971	<b>0.00650</b>	<2.00	<0.0971	<0.0971	<0.0971
	06/29/04	-	<b>0.343</b>	<0.1	<b>0.03</b>	<b>0.0226</b>	<b>0.0208</b>	<b>0.0292</b>	<b>0.0299</b>	<0.1	<b>0.0391</b>	<0.1	<b>0.0657</b>	<b>0.591</b>	<b>0.0223</b>	<2.0	<b>0.118</b>	<b>0.0569</b>	
<b>CR-26</b>	10/01/04	-	<0.400	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	<b>0.242</b>	<0.100	<0.400	<b>0.364</b>	<0.100	
	12/16/04	-	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	<0.150	<0.100	<2.00	<b>0.252</b>	<0.100	
	03/09/05	-	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	<b>0.215</b>	<0.100	<0.200	<b>0.165</b>	<0.100	
	06/22/05	-	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.100	<0.200	<0.100	<b>0.264</b>	<0.100	<0.100	<0.100	<0.100	
	09/22/05	-	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.0990	<0.198	<0.0990	<b>0.172</b>	<0.0990	<0.0990	<0.0990	<0.0990	
	01/31/06	<0.0189	<b>0.0343</b>	<0.0189	<0.0472	<0.0189	<0.0189	<0.0189	<0.0189	<0.0189	<0.0189	<0.0189	<0.0189	<b>0.125</b>	<0.0189	<2.00	<0.0472	<0.0189	
	09/26/06	-	<0.0200	<0.0200	<0.0200	<b>0.0214</b>	<b>0.0292</b>	<b>0.0256</b>	<b>0.0252</b>	<b>0.0285</b>	<b>0.0297</b>	<0.0200	<b>0.0526</b>	<b>0.0764</b>	<b>0.0219</b>	<2.00	<b>0.0368</b>	<b>0.0520</b>	
	09/19/07	<0.490	<0.490	<0.490	<0.490	<b>0.0314</b>	<b>0.0336</b>	<b>0.0455</b>	<0.490	<b>0.0442</b>	<b>0.0540</b>	<0.0245	<0.490	<0.490	<b>0.0326</b>	<2.00	<0.490	<0.980	
	12/18/07	<0.200	<0.200	<0.200	<0.200	<b>0.0155</b>	<b>0.0214</b>	<b>0.0259</b>	<0.200	<b>0.0254</b>	<b>0.0262</b>	<b>0.0171</b>	<0.200	<0.200	<b>0.0283</b>	<0.200	<0.200	<0.200	
	03/25/08	<0.0962	<0.0962	<0.0962	<0.0962	<b>0.0118</b>	<b>0.0126</b>	<b>0.0145</b>	<0.0962	<b>0.0135</b>	<b>0.0206</b>	<0.00481	<0.0962	<0.0962	<b>0.0122</b>	<0.0962	<0.0962	<0.0962	
	06/24/08	<0.0985	<0.0985	<0.0985	<0.0985	<b>0.0238</b>	<b>0.0271</b>	<b>0.0326</b>	<0.0985	<b>0.0283</b>	<b>0.0394</b>	<b>0.0101</b>	<b>0.0583</b>	<b>0.0849</b>	<b>0.0267</b>	<0.0985	<b>0.0720</b>	<b>0.0583</b>	
	09/23/08	<0.0952	<0.0952	<0.0952	<0.0952	<b>0.0144</b>	<b>0.0150</b>	<b>0.0142</b>	<0.0952	<b>0.0158</b>	<b>0.0221</b>	<b>0.00510</b>	<0.0952	<b>0.0574</b>	<b>0.0129</b>	<0.0952	<0.0952	<0.0952	
	01/06/09	<0.0980	<0.0980	<0.0980	<0.0980	<b>0.0146</b>	<b>0.0151</b>	<b>0.0199</b>	<0.0980	<b>0.0162</b>	<b>0.0254</b>	<b>0.00513</b>	<b>0.0518</b>	<b>0.0508</b>	<b>0.0171</b>	<0.0980	<0.0980	<0.0980	
	03/26/09	<0.0971	<0.0971	<0.0971	<0.0971	<b>0.231</b>	<b>0.275</b>	<b>0.297</b>	<b>0.301</b>	<b>0.311</b>	<b>0.405</b>	<b>0.0844</b>	<b>0.517</b>	<0.0971	<b>0.260</b>	<2.00	<b>0.320</b>	<b>0.561</b>	
	09/24/09	<0.100	<0.100	<0.100	<0.100	<b>0.184</b>	<b>0.211</b>	<b>0.237</b>	<b>0.230</b>	<b>0.241</b>	<b>0.295</b>	<b>0.0593</b>	<b>0.478</b>	<0.100	<b>0.176</b>	<2.00	<b>0.293</b>	<b>0.407</b>	
	03/26/10	<0.190	<0.190	<0.190	<0.190	<b>0.136</b>	<b>0.126</b>	<b>0.127</b>	<0.190	<b>0.130</b>	<b>0.190</b>	<b>0.0370</b>	<b>0.299</b>	<0.190	<b>0.114</b>	<2.00	<0.190	<b>0.328</b>	
	10/01/10	<0.0962	<0.0962	<0.0962	<														

**TABLE 8**  
**GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA CLUSTER WELLS - PAHs**  
 Willbridge Terminals  
 Portland, Oregon

Well Identification	Date Sampled	2-Methyl-naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo (a) anthracene	Benzo (a) pyrene	Benzo (b) fluoranthene	Benzo (g,h,i) perylene	Benzo (k) fluoranthene	Chrysene	Dibenzo (a,h) anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
<b>CR-27C</b>	09/25/2006	-	<b>0.0395</b>	<0.0303	<b>0.0497</b>	<b>0.237</b>	<b>0.289</b>	<b>0.334</b>	<b>0.291</b>	<b>0.294</b>	<b>0.352</b>	<b>0.0916</b>	<b>0.539</b>	<b>0.0702</b>	<b>0.261</b>	<2.00	<b>0.304</b>	<b>0.549</b>
	12/18/07	<0.0995	<0.0995	<0.0995	<0.0995	<b>0.561</b>	<b>0.347</b>	<b>0.439</b>	<0.995	<b>0.461</b>	<b>0.582</b>	<b>0.110</b>	<b>1.01</b>	<0.0995	<b>0.326</b>	<0.0995	<b>0.346</b>	<b>0.86</b>
	03/25/08	<0.0995	<0.0995	<0.0995	<0.0995	<b>0.0375</b>	<b>0.0382</b>	<b>0.0519</b>	<0.0995	<b>0.0478</b>	<b>0.0583</b>	<b>0.0136</b>	<0.0995	<0.0995	<b>0.0415</b>	<0.0995	<0.0995	<0.0995
	06/24/08	<0.0971	<0.0971	<0.0971	<0.0971	<b>0.101</b>	<b>0.125</b>	<b>0.148</b>	<b>0.141</b>	<b>0.142</b>	<b>0.173</b>	<b>0.0455</b>	<b>0.200</b>	<0.0971	<b>0.126</b>	<0.0971	<b>0.129</b>	<b>0.198</b>
	09/23/08	<0.0952	<0.0952	<0.0952	<0.0952	<b>0.0948</b>	<b>0.0996</b>	<b>0.104</b>	<b>0.105</b>	<b>0.0911</b>	<b>0.140</b>	<b>0.0344</b>	<b>0.215</b>	<0.0952	<b>0.0928</b>	<0.0952	<b>0.130</b>	<b>0.240</b>
	01/06/09	<0.0971	<0.0971	<0.0971	<b>0.0693</b>	<b>0.238</b>	<b>0.334</b>	<b>0.377</b>	<b>0.327</b>	<b>0.334</b>	<b>0.404</b>	<b>0.101</b>	<b>0.506</b>	<0.0971	<b>0.292</b>	<0.0971	<b>0.442</b>	<b>0.329</b>
	03/26/09	<0.0971	<0.0971	<0.0971	<0.0971	<b>0.377</b>	<b>0.457</b>	<b>0.629</b>	<b>0.570</b>	<b>0.540</b>	<b>0.644</b>	<b>0.153</b>	<b>0.841</b>	<0.0971	<b>0.477</b>	<2.00	<b>0.488</b>	<b>1.01</b>
	09/24/09	<0.105	<0.211	<0.211	<0.105	<0.00526	<0.00526	<0.00526	<0.105	<0.00526	<0.00526	<0.00526	<0.105	<0.211	<0.00526	<0.105	<0.105	<0.105
	03/26/10	<0.500	<0.500	<0.500	<0.500	<b>0.550</b>	<b>0.556</b>	<b>0.558</b>	<b>0.545</b>	<b>0.572</b>	<b>0.827</b>	<b>0.162</b>	<b>1.15</b>	<0.500	<b>0.515</b>	<2.00	<b>0.590</b>	<b>1.23</b>
	10/01/10	<0.0952	<0.0952	<0.0952	<0.0952	<b>0.162</b>	<b>0.182</b>	<b>0.187</b>	<b>0.167</b>	<b>0.184</b>	<b>0.234</b>	<b>0.0552</b>	<b>0.486</b>	<0.0952	<b>0.169</b>	<2.00	<b>0.171</b>	<b>0.344</b>
	03/25/11	<0.0952	<0.0952	<0.0952	<0.0952	<b>0.122</b>	<b>0.141</b>	<b>0.154</b>	<b>0.130</b>	<b>0.159</b>	<b>0.189</b>	<b>0.0388</b>	<b>0.308</b>	<0.0952	<b>0.116</b>	<2.00	<b>0.183</b>	<b>0.254</b>
	10/01/12	<0.098	<0.098	<0.098	<0.098	<b>0.0072</b>	<b>0.0067</b>	<b>0.013</b>	<0.098	<b>0.011</b>	<b>0.012</b>	<0.0049	<0.098	<0.098	<b>0.011</b>	<0.098	<0.098	<0.098
	09/24/13	<0.099	<0.099	<0.099	<0.099	<0.0050	<0.0050	<0.0050	<0.099	<0.0050	<b>0.0052</b>	<0.0050	<0.099	<0.099	<0.0050	<0.099	<0.099	<0.099
	09/08/14	<0.10	<0.10	<0.10	<0.10	<b>0.012</b>	<b>0.016</b>	<b>0.03</b>	<0.10	<b>0.0089</b>	<b>0.02</b>	<0.0052	<0.10	<0.10	<b>0.013</b>	<0.10	<0.10	<0.10
	09/14/15	<0.012	<0.095	<0.095	<0.024*	<b>0.021</b>	<b>0.024*</b>	<b>0.069</b>	0.012*	<b>0.023</b>	<b>0.028</b>	<0.0095	<0.048	<0.095	<b>0.012</b>	<0.0095	<0.095	<0.048
<b>CR-28A</b>	12/19/07	<b>117</b>	<b>0.598</b>	<0.485	<0.485	<b>0.107</b>	<b>0.0965</b>	<b>0.0834</b>	<0.971	<b>0.0803</b>	<b>0.135</b>	<0.0485	<b>0.298</b>	<b>1.06</b>	<b>0.0755</b>	<b>421</b>	<b>0.670</b>	<b>0.313</b>
	03/27/08	<b>85.8</b>	<b>0.613</b>	<0.381	<0.381	<b>0.026</b>	<0.0190	<0.0190	<0.381	<0.0190	<b>0.0324</b>	<0.0190	<0.381	<b>0.808</b>	<0.0190	<b>269</b>	<b>0.497</b>	<0.381
	06/25/08	<b>55.3</b>	<b>0.448</b>	<0.476	<0.476	<0.0238	<0.0238	<0.0238	<0.476	<0.0238	<b>0.0262</b>	<0.0238	<0.476	<b>0.535</b>	<0.0238	<b>177</b>	<b>0.399</b>	<0.476
	09/25/08	<b>55.6</b>	<b>0.422</b>	<0.481	<0.481	<b>0.0268</b>	<0.0240	<0.0240	<0.481	<0.0240	<b>0.0307</b>	<0.0240	<0.481	<b>0.557</b>	<0.0240	<b>184</b>	<b>0.442</b>	<0.481
	01/08/09	<b>66.3</b>	<b>0.376</b>	<0.513	<0.513	<b>0.0386</b>	<b>0.0324</b>	<0.0256	<0.513	<0.0256	<b>0.0473</b>	<0.0256	<0.513	<b>0.559</b>	<b>0.0275</b>	<b>466</b>	<b>0.414</b>	<0.513
	03/27/09	<b>80.2</b>	<b>0.596</b>	<0.388	<0.388	<b>0.0614</b>	<b>0.0626</b>	<b>0.0484</b>	<0.388	<b>0.0509</b>	<b>0.0745</b>	<0.0194	<0.388	<b>0.898</b>	<b>0.0577</b>	<b>545</b>	<b>0.676</b>	<0.388
	09/24/09	<b>125</b>	<b>0.611</b>	<0.324	<0.324	<b>0.0376</b>	<b>0.0339</b>	<b>0.0249</b>	<0.324	<b>0.0273</b>	<b>0.0464</b>	<0.0162	<0.324	<b>0.799</b>	<b>0.0253</b>	<b>435</b>	<b>0.736</b>	<0.324
	01/26/10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	<b>360</b>	-	-
	03/26/10	<b>72.3</b>	<1.00	<1.00	<1.00	<0.0500	<0.0500	<0.0500	<1.00	<0.0500	<1.00	<0.0500	<1.00	<b>1.0</b>	<0.0500	<b>380</b>	<1.00	<1.00
	06/14/10	<b>88</b>	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<b>420</b>	<1.00	<1.00
	08/17/10	<b>140</b>	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<b>1.0</b>	<1.00	<b>680</b>	<1.00	<1.00
	09/15/10	<b>150</b>	<b>1.0</b>	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<b>1.0</b>	<1.00	<b>370</b>	<b>1.0</b>	<1.00
	10/13/10	<b>69</b>	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<b>280</b>	<1.00	<1.00
	11/08/10	<b>61</b>	<1.00	<1.00	<1.00	<1.0												

**TABLE 8**  
**GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA CLUSTER WELLS - PAHs**  
 Willbridge Terminals  
 Portland, Oregon

Well Identification	Date Sampled	2-Methyl-naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo (a) anthracene	Benzo (a) pyrene	Benzo (b) fluoranthene	Benzo (g,h,i) perylene	Benzo (k) fluoranthene	Chrysene	Dibenzo (a,h) anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene	
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	
<b>CR-28B</b>	01/31/06	<b>0.0865</b>	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<0.0192	<2.00	<0.0192	<0.0192		
	12/19/07	<0.0980	<0.0980	<0.0980	<0.0980	<b>0.0110</b>	<b>0.0116</b>	<b>0.0169</b>	<0.0980	<b>0.0160</b>	<b>0.0170</b>	<0.00490	<0.0980	<0.0980	<b>0.0106</b>	<0.0980	<0.0980	<0.0980	
	03/27/08	<0.0952	<0.0952	<0.0952	<0.0952	<b>0.0143</b>	<b>0.0154</b>	<b>0.0218</b>	<0.190	<b>0.0185</b>	<b>0.0245</b>	<0.00952	<0.0952	<0.0952	<b>0.0120</b>	<0.0952	<0.0952	<0.0952	
	06/25/08	<0.192	<0.192	<0.192	<0.192	<0.00962	<0.00962	<0.00962	<0.192	<0.00962	<0.00962	<0.192	<0.192	<0.00962	<0.192	<0.192	<0.192	<0.192	
	09/25/08	<0.0962	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<b>0.00498</b>	<0.00481	<0.0962	<0.0962	<0.00481	<0.0962	<0.0962	<0.0962	<0.0962
	01/08/09	<0.108	<0.108	<0.108	<0.108	<b>0.0316</b>	<b>0.0341</b>	<b>0.0449</b>	<0.108	<b>0.0454</b>	<b>0.0425</b>	<b>0.0103</b>	<b>0.0682 J</b>	<0.108	<b>0.0291</b>	<2.00	<0.108	<0.108	
	03/27/09	<0.0971	<0.0971	<0.0971	<0.0971	<b>0.0328</b>	<b>0.0370</b>	<b>0.0468</b>	<0.0971	<b>0.0500</b>	<b>0.0549</b>	<b>0.0129</b>	<0.0971	<0.0971	<b>0.0376</b>	<2.00	<0.0971	<0.0971	
	09/24/09	<0.100	<0.100	<0.100	<0.100	<b>0.0168</b>	<b>0.0225</b>	<b>0.0292</b>	<0.100	<b>0.0253</b>	<b>0.0290</b>	<b>0.00716</b>	<0.100	<0.100	<b>0.0222</b>	<2.00	<0.100	<0.100	
	01/26/10	-	-	-	-	-	-	-	-	-	-	-	-	-	<1.00	-	-		
	03/26/10	<0.100	<0.100	<0.100	<0.100	<b>0.0201</b>	<b>0.0188</b>	<b>0.0209</b>	<0.100	<b>0.0204</b>	<1.00	<1.00	<0.100	<0.100	<b>0.0164</b>	<1.00	<0.100	<0.100	
	06/14/10	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	
	08/17/10	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	
	09/16/10	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	
	10/14/10	<0.0962	<0.0962	<0.0962	<0.0962	<b>0.00844</b>	<b>0.0119</b>	<b>0.0114</b>	<0.0962	<b>0.0125</b>	<b>0.0142</b>	<0.00481	<0.0962	<0.0962	<b>0.00905</b>	<2.00	<0.0962	<0.0962	
	03/24/11	<0.0952	<0.0952	<0.0952	<0.0952	<b>0.00942</b>	<b>0.0121</b>	<b>0.0146</b>	<0.0952	<b>0.0148</b>	<b>0.0180</b>	<0.00476	<0.0952	<0.0952	<b>0.0113</b>	<2.00	<0.0952	<0.0952	
	10/04/11	<0.0980	<0.0980	<0.0980	<0.0980	<0.00490	<0.00490	<0.00490	<0.0980	<0.00490	<0.00490	<0.0980	<0.0980	<0.00490	<2.00	<0.0980	<0.0980		
	09/28/12	<0.095	<0.095	<0.095	<0.095	<0.0048	<0.0048	<b>0.0093 B</b>	<0.095	<b>0.0050 B</b>	<b>0.0064 B</b>	<0.0048	<0.095	<0.095	<b>0.0053 B</b>	<0.095	<0.095	<0.095	
	09/24/13	<0.096	<0.096	<0.096	<0.096	<0.0048	<0.0048	<0.0048	<0.096	<0.0048	<0.0048	<0.096	<0.096	<0.0048	<0.096	<0.096	<0.096		
	09/09/14	<0.11	<0.11	<0.11	<0.11	<0.0053	<0.0053	0.0088	<0.11	<0.0053	<0.0053	<0.0053	<0.11	<0.11	<0.0053	<0.11	<0.11	<0.11	
	09/08/15	<0.014	<0.011	<0.011*	<0.027*	<0.027	0.033*	<b>0.074</b>	<b>0.022</b>	<b>0.023</b>	<b>0.041</b>	<0.011	<b>0.066</b>	<0.011	<b>0.025</b>	<b>0.025</b>	<0.11	<b>0.069</b>	
<b>CR-28C</b>	01/31/06	<b>0.0259</b>	<0.0189	<0.0189	<0.0189	<0.0189	<0.0189	<0.0189	<0.0189	<0.0189	<0.0189	<0.0189	<0.0189	<0.0189	<0.0189	<2.00	<b>0.0200</b>	<0.0189	
	12/19/07	<0.0980	<0.0980	<0.0980	<0.0980	<b>0.143</b>	<b>0.0871</b>	<b>0.147</b>	<0.0980	<b>0.0964</b>	<b>0.149</b>	<b>0.0199</b>	<b>0.536</b>	<0.0980	<b>0.0555</b>	<0.0980	<0.0980	<b>0.322</b>	
	03/27/08	<0.0952	<0.0952	<0.0952	<0.0952	<b>0.025</b>	<b>0.0211</b>	<b>0.0308</b>	<0.190	<b>0.0263</b>	<b>0.0391</b>	<0.00952	<0.0952	<0.0952	<b>0.0161</b>	<0.0952	<0.0952	<0.0952	
	06/25/08	<0.0952	<0.0952	<0.0952	<0.0952	<b>0.0494</b>	<b>0.0421</b>	<b>0.0517</b>	<0.0952	<b>0.0478</b>	<b>0.0649</b>	<b>0.0131</b>	<b>0.102</b>	<0.0952	<b>0.0345</b>	<0.0952	<0.0952	<b>0.119</b>	
	09/25/08	<b>0.0783</b>	<0.0962	<0.0962	<0.0962	<b>0.0171</b>	<b>0.00854</b>	<b>0.0129</b>	<0.0962	<b>0.00891</b>	<b>0.0203</b>	<0.00481	<0.0962	<0.0962	<b>0.00713</b>	<b>0.481</b>	<0.0962	<0.0962	
	01/08/09	<0.103	<0.103	<0.103	<0.103	<b>0.0587</b>	<b>0.0476</b>	<b>0.0660</b>	<0.103	<b>0.0479</b>	<b>0.0721</b>	<b>0.0118</b>	<b>0.152</b>	<0.103	<b>0.0316</b>	<2.00	<0.103	<b>0.0702 J</b>	
	03/27/09	<0.0966	<0.0966	<0.0966	<0.0966	<b>0.0735</b>	<b>0.0783</b>	<b>0.106</b>	<0.0966	<b>0.103</b>	<b>0.106</b>	<b>0.0265</b>	<b>0.129</b>	<0.0966	<b>0.0725</b>	<2.00	<0.0966	<b>0.140</b>	
	09/24/09	<0.100	<0.100	<0.100	<0.100	<b>0.0242</b>	<b>0.0341</b>	<b>0.0379</b>	<0.100	<b>0.0371</b>	<b>0.0413</b>	<b>0.00894</b>	<0.100	<0.100	<b>0.0269</b>	<2.00	<0.100	<0.100	
	03/26/10	<0.200	&																

**TABLE 8**  
**GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA CLUSTER WELLS - PAHs**  
 Willbridge Terminals  
 Portland, Oregon

Well Identification	Date Sampled	2-Methyl-naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo (a) anthracene	Benzo (a) pyrene	Benzo (b) fluoranthene	Benzo (g,h,i) perylene	Benzo (k) fluoranthene	Chrysene	Dibenzo (a,h) anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene	
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	
<b>CR 29A</b>	02/01/06	<b>4.70</b>	<b>0.182</b>	<0.0400	<b>0.0428</b>	<0.0400	<0.0200	<0.0200	<0.0200	<0.0200	<0.0400	<b>0.00586</b>	<0.00476	<0.0952	<b>0.182</b>	<0.00476	<3.57	<b>0.307</b>	<0.0952
	12/18/07	<b>6.3</b>	<b>0.411</b>	<0.149	<0.495	<b>0.0418</b>	<b>0.0555</b>	<b>0.0321</b>	<0.0990	<b>0.0365</b>	<b>0.0504</b>	<b>0.00785</b>	<0.495	<b>0.491</b>	<b>0.0257</b>	<4.46	<b>0.621</b>	<0.495	
	03/27/08	<b>3.48</b>	<b>0.145</b>	<0.0952	<0.0952	<b>0.00500</b>	<0.00476	<0.00476	<0.0952	<0.00476	<b>0.00586</b>	<0.00476	<0.0952	<b>0.182</b>	<0.00476	<3.57	<b>0.307</b>	<0.0952	
	06/26/08	<b>10.9</b>	<b>0.473</b>	<0.0952	<b>0.0707</b>	<b>0.00636</b>	<0.00476	<0.00476	0.0952	<0.00476	<b>0.00733</b>	<0.00476	<b>0.0479</b>	<b>0.574</b>	<0.00476	<b>2.51</b>	<b>0.873</b>	<b>0.0621</b>	
	09/25/08	<b>11.2</b>	<b>0.723</b>	<0.144	<b>0.0654</b>	<b>0.0148</b>	<0.00481	<0.00481	<0.0962	<0.00481	<b>0.0167</b>	<0.00481	<b>0.0653</b>	<b>0.685</b>	<0.00481	<4.33	<b>0.990</b>	<b>0.103</b>	
	01/08/09	<b>6.39</b>	<b>0.536</b>	<0.148	<0.0985	<b>0.00721</b>	<0.00493	<0.00493	<0.0985	<0.00493	<b>0.00860</b>	<0.00493	<0.0985	<b>0.770</b>	<0.00493	<b>2.90 J</b>	<b>0.587</b>	<b>0.0501 J</b>	
	03/26/09	<b>5.31</b>	<b>0.515</b>	<0.146	<0.0971	<b>0.0135</b>	<b>0.00728</b>	<0.00485	<0.0971	<b>0.00512</b>	<b>0.0149</b>	<0.00485	<0.0971	<b>0.621</b>	<0.00485	<2.00	<b>0.826</b>	<0.0971	
	09/24/09	<b>4.08</b>	<b>0.645</b>	<0.149	<0.0990	<b>0.00786</b>	<0.00495	<0.00495	<0.0990	<0.00495	<b>0.00689</b>	<0.00495	<0.0990	<b>0.518</b>	<0.00495	<2.00	<b>0.788</b>	<0.0990	
	03/25/10	<b>1.04</b>	<b>0.412</b>	<0.0957	<0.0957	<b>0.00578</b>	<0.00478	<0.00478	<0.0957	<0.00478	<b>0.00627</b>	<0.00478	<0.0957	<b>0.442</b>	<0.00478	<2.00	<b>0.431</b>	<0.0957	
	10/01/10	<b>2.26</b>	<b>0.781</b>	<0.143	<0.0952	<b>0.0286</b>	<b>0.0245</b>	<b>0.0139</b>	<0.0952	<b>0.0164</b>	<b>0.0325</b>	<0.00476	<b>0.0977</b>	<b>0.810</b>	<b>0.0137</b>	<4.00	<b>1.02</b>	<b>0.161</b>	
<b>CR 29B</b>	03/25/11	<b>0.270</b>	<b>0.213</b>	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<0.00481	<0.0962	<b>0.299</b>	<0.00481	<2.00	<b>0.170</b>	<0.0962		
	10/03/11	<b>0.890</b>	<b>0.673</b>	<0.196	<0.0980	<b>0.00793</b>	<0.00490	<0.00490	<0.0980	<0.00490	<b>0.00842</b>	<0.00490	<0.0980	<b>0.657</b>	<0.00490	<2.00	<b>0.651</b>	<0.0980	
	02/01/06	<0.0189	<0.0189	<0.0189	<0.0189	<0.0189	<0.0189	<0.0189	<0.0189	<0.0189	<0.0189	<0.0189	<0.0189	<0.0189	<0.0189	<2.00	<0.0189	<0.0189	
	09/21/07	<0.0990	<0.0990	<0.0990	<0.0990	<0.00495	<0.00495	<0.00495	<0.0990	<0.00495	<0.00495	<0.0990	<0.0990	<0.00495	<2.00	<0.0990	<0.0990		
	12/18/07	<0.0980	<0.0980	<0.0980	<0.0980	<b>0.0101</b>	<b>0.0118</b>	<b>0.0167</b>	<0.0980	<b>0.0156</b>	<b>0.0177</b>	<0.00490	<0.0980	<0.0980	<b>0.0103</b>	<0.0980	<0.0980	<0.196	
	03/27/08	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<b>0.00646</b>	<0.0952	<b>0.00564</b>	<b>0.00669</b>	<0.00476	<0.0952	<0.0952	<b>0.00498</b>	<0.0952	<0.0952	<0.0952	
	06/26/08	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.00476	<0.0952	<0.0952	<0.00476	<0.0952	<0.0952	<0.0952		
	09/25/08	<0.0962	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<0.00481	<0.0962	<0.0962	<0.00481	<0.0962	<0.0962	<0.0962		
	01/08/09	<0.0980	<0.0980	<0.0980	<0.0980	<b>0.00548</b>	<b>0.00626</b>	<b>0.00733</b>	<0.0980	<b>0.00776</b>	<b>0.00944</b>	<0.00490	<0.0980	<0.0980	<b>0.00602</b>	<2.00	<0.0980	<0.0980	
	03/26/09	<0.0971	<0.0971	<0.0971	<0.0971	<b>0.00569</b>	<b>0.00627</b>	<b>0.00813</b>	<0.0971	<b>0.00711</b>	<b>0.00839</b>	<0.00485	<0.0971	<0.0971	<b>0.00602</b>	<2.00	<0.0971	<0.0971	
<b>CR 29B</b>	09/24/09	<0.0990	<0.0990	<0.0990	<0.0990	<0.00495	<0.00495	<0.00495	<0.0990	<0.00495	<0.00495	<0.0990	<0.0990	<0.00495	<2.00	<0.0990	<0.0990		
	03/25/10	<0.0957	<0.0957	<0.0957	<0.0957	<0.00478	<0.00478	<0.00478	<0.0957	<0.00478	<0.00478	<0.0957	<0.0957	<0.00478	<2.00	<0.0957	<0.0957		
	10/01/10	<0.0962	<0.0962	<0.0962	<0.0962	<b>0.00516</b>	<b>0.00511</b>	<b>0.00543</b>	<0.0962	<b>0.00558</b>	<b>0.00809</b>	<0.00481	<0.0962	<0.0962	<0.00481	<2.00	<0.0962	<0.0962	
	03/25/11	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.00476	<0.0952	<0.0952	<0.00476	<2.00	<0.0952	<0.0952		
	10/04/11	<0.0980	<0.0980	<0.0980	<0.0980	<0.00490	<0.00490	<0.00490	<0.0980	<0.00490	<0.00490	<0.0980	<0.0980	<0.00490	<2.00	<0.0980	<0.0980		
	09/15/14	<0.11	<0.11	<0.11	<0.11	<0.0054	<0.0054	<0.0054	<0.11	<0.0054	<0.0054	<0.11	<0.11	<0.0054	<0.11	<0.11	<0.11		
	09/09/15	<0.014	<0.011	<0.011*	<0.027*	<0.011	<0.011*	<0.011	<0.										

**TABLE 8**  
**GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA CLUSTER WELLS - PAHs**  
 Willbridge Terminals  
 Portland, Oregon

Well Identification	Date Sampled	2-Methyl-naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo (a) anthracene	Benzo (a) pyrene	Benzo (b) fluoranthene	Benzo (g,h,i) perylene	Benzo (k) fluoranthene	Chrysene	Dibenzo (a,h) anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
<b>CR-30A</b>	02/01/06	<0.0381	<b>0.557</b>	<0.0381	<0.0571	<0.0381	<0.0381	<0.0381	<0.0381	<0.0381	<0.0381	<0.0381	<0.0381	<b>1.29</b>	<0.0381	<2.00	<b>0.392</b>	<b>0.0796</b>
	12/20/07	<0.495	<b>0.572</b>	<0.495	<0.495	<0.0248	<b>0.0276</b>	<b>0.0164</b>	<0.0990	<b>0.0173</b>	<b>0.0306</b>	<b>0.00561</b>	<0.495	<b>1.20</b>	<b>0.0167</b>	<1.98	<b>0.568</b>	<0.495
	03/26/08	<0.0976	<b>0.375</b>	<0.195	<0.0976	<0.0244	<b>0.0103</b>	<b>0.00751</b>	<0.0976	<b>0.00731</b>	<0.0244	<0.00488	<0.0976	<b>1.49</b>	<b>0.00658</b>	<0.293	<b>0.550</b>	<0.0976
	06/26/08	<0.0952	<b>0.811</b>	<0.190	0.0838	<b>0.0117</b>	<b>0.00653</b>	<0.00476	<0.0952	<0.00476	<b>0.0154</b>	<0.00476	<0.0952	<b>1.15</b>	<0.00476	<0.857	<b>1.15</b>	<b>0.115</b>
	09/24/08	<0.0962	<b>0.602</b>	<0.0962	<0.0962	<b>0.0170</b>	<b>0.0104</b>	<b>0.00658</b>	<0.0962	<b>0.00622</b>	<b>0.0253</b>	<0.00481	<0.0962	<b>0.921</b>	<b>0.00599</b>	<0.817	<b>0.427</b>	<b>0.130</b>
	01/07/09	<0.0976	<b>0.137</b>	<0.0976	<0.0976	<0.00488	<0.00488	<0.00488	<0.0976	<0.00488	<0.00488	<0.0976	<b>0.330</b>	<0.00488	<2.00	<b>0.134</b>	<0.0976	
	03/25/09	<0.0971	<b>0.794</b>	<0.194	<0.146	<b>0.0151</b>	<b>0.0201</b>	<b>0.0128</b>	<0.0971	<b>0.0122</b>	<b>0.0212</b>	<0.00485	<0.0971	<b>2.80</b>	<b>0.0149</b>	<2.00	<b>1.40</b>	<b>0.128</b>
	09/23/09	<0.0971	<b>0.451</b>	<0.0971	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	<0.00485	<b>0.00550</b>	<0.00485	<0.0971	<b>0.538</b>	<0.00485	<2.00	<b>0.363</b>	<0.0971
	03/25/10	<0.0952	<b>0.593</b>	<0.143	<0.0952	<b>0.0194</b>	<b>0.0233</b>	<b>0.0146</b>	<0.0952	<b>0.0135</b>	<b>0.0249</b>	<0.00476	<0.0952	<b>1.75</b>	<b>0.0192</b>	<2.00	<b>0.767</b>	<b>0.107</b>
	09/30/10	<0.0952	<b>0.723</b>	<0.190	<0.0952	<b>0.0237</b>	<b>0.0314</b>	<b>0.0205</b>	<0.0952	<b>0.0236</b>	<b>0.0318</b>	<b>0.00559</b>	<0.0952	<b>2.72</b>	<b>0.0193</b>	<2.00	<b>1.16</b>	<b>0.120</b>
	03/25/11	<0.0962	<0.0962	<0.0962	<0.0962	<0.00481	0.00667	<b>0.00660</b>	<0.0962	<b>0.00722</b>	<b>0.00705</b>	<0.00481	<0.0962	<0.0962	<b>0.00632</b>	<2.00	<0.0962	<0.0962
	09/30/11	<0.0971	<b>0.657</b>	<0.194	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	<0.00485	<b>0.00671</b>	<0.00485	<0.0971	<b>1.39</b>	<0.00485	<2.00	<b>0.698</b>	<0.0971
	09/28/12	<0.12	<b>0.43</b>	<0.12	<0.12	<b>0.0085</b>	<0.0059	<b>0.018 B</b>	<0.12	<b>0.0099 B</b>	<b>0.021 B</b>	<0.0059	<0.12	<b>1.5</b>	<b>0.0066 B</b>	<1.2	<b>0.54</b>	<0.12
	09/25/13	<0.096	<b>0.81</b>	<0.19	<0.096	<0.096	<0.096	<0.096	<0.096	<0.096	<0.096	<0.19	<0.096	<b>1.8</b>	<0.096	<0.82	<b>1.3</b>	<b>0.079 J</b>
	09/04/14	<0.12	<b>0.49</b>	<0.12	<0.12	<0.0062	<0.0062	<0.0062	<0.12	<0.0062	<0.0062	<0.0062	<0.12	<b>1.4</b>	<0.0062	<0.12	<b>0.96</b>	<0.12
	09/11/15	<0.012	<b>0.73</b>	<b>0.16</b>	<b>0.030*</b>	<0.095	<0.0095*	<0.0095	<0.0095*	<0.0095	<0.095	<0.0095	<0.047	<b>1.3</b>	<0.0095	<b>0.32</b>	<b>0.8</b>	<b>0.047</b>
<b>CR-30B</b>	02/01/06	<0.0189	<0.0189	<0.0189	<0.0189	<0.0189	<0.0189	<0.0189	<0.0189	<0.0189	<0.0189	<0.0189	<0.0189	<0.0189	<0.0189	<2.00	<0.0189	<0.0189
	12/20/07	<0.0990	<0.0990	<0.0990	<0.0990	<0.00495	<0.00495	<b>0.00581</b>	<0.0990	<0.00495	<0.00495	<0.0990	<0.0990	<0.0990	<0.00495	<0.0990	<0.0990	<0.0990
	03/26/08	<0.0971	<0.0971	<0.0971	<0.0971	<b>0.00604</b>	<b>0.00572</b>	<b>0.00825</b>	<0.0971	<b>0.00615</b>	<b>0.00884</b>	<0.00485	<0.0971	<0.0971	<b>0.00573</b>	<0.0971	<0.0971	<0.0971
	06/26/08	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.0952	<0.00476	<0.0952	<0.0952	<0.0952
	09/24/08	<0.0962	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.0962	<0.00481	<0.0962	<0.0962	<0.0962
	01/07/09	<0.0976	<0.0976	<0.0976	<0.0976	<0.00488	<0.00488	<0.00488	<0.0976	<0.00488	<0.00488	<0.0976	<0.0976	<0.00488	<2.00	<0.0976	<0.0976	
	03/25/09	<0.0971	<0.0971	<0.0971	<0.0971	<0.00485	<b>0.00491</b>	<b>0.00600</b>	<0.0971	<b>0.00522</b>	<b>0.00681</b>	<0.00485	<0.0971	<0.0971	<0.00485	<2.00	<0.0971	<0.0971
	09/23/09	<0.0971	<b>0.413</b>	<0.0971	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	<0.00485	<b>0.00608</b>	<0.00485	<0.0971	<b>0.787</b>	<0.00485	<2.00	<b>0.429</b>	<0.0971
	03/25/10	<0.0952	<0.0952	<0.0952	<0.0952	<b>0.00511</b>	<0.00476	<b>0.00520</b>	<0.0952	<0.00476	<b>0.00671</b>	<0.00476	<0.0952	<0.0952	<0.00476	<2.00	<0.0952	<0.0952
	09/30/10	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<b>0.00498</b>	<0.00476	<0.0952	<0.0952	<0.00476	<2.00	<0.0952	<0.0952
	03/25/11	<0.0962	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<0.00481	<0.0962	<0.0962	<0.00481	<2.00	<0.0962	<0.0962	
</td																		

**TABLE 8**  
**GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA CLUSTER WELLS - PAHs**  
 Willbridge Terminals  
 Portland, Oregon

Well Identification	Date Sampled	2-Methyl-naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo (a) anthracene	Benzo (a) pyrene	Benzo (b) fluoranthene	Benzo (g,h,i) perylene	Benzo (k) fluoranthene	Chrysene	Dibenzo (a,h) anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene	
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	
<b>CR-31A</b>	01/18/06	<b>0.0400</b>	<b>1.40</b>	<b>0.380</b>	<b>0.700</b>	<b>0.0400</b>	<b>0.0400</b>	<b>0.0400</b>	0.0400	<b>0.0400</b>	<b>0.0800</b>	<b>0.0400</b>	<b>0.102</b>	<b>2.70</b>	<b>0.0400</b>	2.00	<b>1.77</b>	<b>0.200</b>	
	12/19/07	<0.990	<b>1.57</b>	<0.990	<0.990	<0.0495	<0.00990	<0.00990	<0.0990	<0.00990	<0.0495	<0.00495	<0.990	<b>7.35</b>	<0.00495	<3.96	<b>1.04</b>	<0.990	
	03/26/08	<0.392	<b>1.12</b>	<0.392	<0.392	<0.0196	<0.0196	<0.0196	<0.392	<0.0196	<0.0196	<0.0196	<0.392	<b>6.12</b>	<0.0196	<0.784	<b>0.579</b>	<0.392	
	06/26/08	<0.0952	<b>1.50</b>	<0.952	<0.190	<b>0.0205</b>	<b>0.0148</b>	<b>0.00918</b>	<0.0952	<b>0.00794</b>	<b>0.0331</b>	<0.00476	<0.0952	<b>6.63</b>	<b>0.00892</b>	<0.952	<b>1.69</b>	<b>0.0977</b>	
	09/24/08	<0.481	<b>1.23</b>	<0.481	<0.481	<0.0240	<0.0240	<0.0240	<0.481	<0.0240	<b>0.0257</b>	<0.0240	<0.481	<b>5.90</b>	<0.0240	<1.20	<b>1.34</b>	<0.481	
	01/07/09	<0.0971	<b>0.951</b>	<0.971	<0.194	<0.00485	<0.00485	<0.00485	<0.0971	<0.00485	<b>0.00758</b>	<0.00485	<0.0971	<b>4.79</b>	<0.00485	<4.00	<b>0.298</b>	<0.0971	
	03/25/09	<0.485	<b>1.87</b>	<0.728	<0.485	<b>0.0341</b>	<b>0.0194</b>	<b>0.0131</b>	<0.0971	<b>0.0114</b>	<b>0.0600</b>	<0.00485	<0.485	<b>9.58</b>	<b>0.0104</b>	<2.00	<b>1.65</b>	<0.485	
	09/23/09	<0.0980	<b>1.49</b>	<0.490	<0.196	<b>0.00685</b>	<b>0.00731</b>	<0.00490	<0.0980	<0.00490	<b>0.0176</b>	<0.00490	<0.0980	<b>8.46</b>	<0.00490	<2.00	<b>1.14</b>	<0.0980	
	03/24/10	<0.0957	<b>0.845</b>	<0.287	<0.144	<0.00478	<0.00478	<0.00478	<0.0957	<0.00478	<0.00957	<0.00478	<0.0957	<b>5.88</b>	<0.00478	<2.00	<0.0957	<0.0957	
	09/30/10	<0.0952	<b>0.31</b>	<0.0952	<0.0952	<b>0.00507</b>	<0.00476	<0.00476	<0.0952	<0.00476	<b>0.0118</b>	<0.00476	<0.0952	<b>1.84</b>	<0.00476	<2.00	<0.0952	<0.0952	
	03/25/11	<0.192	<b>1.17</b>	<0.385	<0.192	<0.00962	<0.00962	<0.00962	<0.192	<0.00962	<0.00962	<0.00962	<0.192	<b>5.34</b>	<0.00962	<2.00	<b>0.333</b>	<0.192	
	09/30/11	<0.0971	<b>0.845</b>	<0.291	<0.194	<0.00485	<0.00485	<0.00485	<0.0971	<0.00485	<0.00971	<0.00485	<0.0971	<b>5.87</b>	<0.00485	<2.00	<b>0.185</b>	<0.0971	
	09/28/12	<0.19	<b>0.81</b>	<0.97	<0.19	<b>0.015</b>	<0.0097	<b>0.029 B</b>	<0.19	<b>0.013 B</b>	<b>0.044 B</b>	<0.0097	<0.19	<b>5.2</b>	<0.0097	<0.97	<b>0.33</b>	<0.19	
	09/24/13	<0.29	<b>1.2</b>	<0.59	<0.29	<b>0.0090</b>	<b>0.0058</b>	<0.0049	<0.098	<0.0049	<b>0.021</b>	<0.0049	<0.29	<b>7.3</b>	<0.0049	<0.88	<b>1.4</b>	<b>0.16</b>	
	09/04/14	<0.11	<b>0.92</b>	<0.22	0.37	<0.017	<0.011	<0.011	<0.11	<0.011	<0.011	<0.11	<0.011	<b>5.2</b>	<0.0055	<0.44	<b>1</b>	<0.11	
	09/11/15	<0.012	<b>1.3</b>	<b>0.35</b>	<b>0.15*</b>	<0.0095	<0.0095*	<0.0095	<0.0095*	<0.0095	<0.0095	<0.0095	<0.0095	<b>0.075</b>	<b>5.3</b>	<0.0095	<b>0.33</b>	<b>0.99</b>	<b>0.08</b>
<b>CR-31B</b>	02/01/06	<0.0189	<b>0.0393</b>	<0.0189	<0.0189	<b>&lt;0.0189</b>	<b>&lt;0.0189</b>	<b>&lt;0.0189</b>	<0.0189	<b>&lt;0.0189</b>	<b>&lt;0.0189</b>	<0.0189	<b>&lt;0.0189</b>	<b>&lt;0.0189</b>	<b>0.113</b>	<b>&lt;0.0189</b>	<2.00	<b>0.0623</b>	<0.0189
	12/20/07	<0.0985	<0.0985	<0.0985	<0.0985	<0.00493	<0.00493	<0.00493	<0.0985	<0.00493	<0.00493	<0.00493	<0.0985	<0.0985	<0.00493	<0.0985	<0.0985	<0.0985	
	03/26/08	<0.0980	<0.0980	<0.0980	<0.0980	<0.00490	<0.00490	<0.00490	<0.0980	<0.00490	<0.00490	<0.00490	<0.0980	<0.0980	<0.00490	<0.0980	<0.0980	<0.0980	
	06/26/08	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.0952	<0.00476	<0.0952	<0.0952	<0.0952	
	09/24/08	<0.0962	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<0.00481	<0.0962	<0.0962	<0.00481	<0.0962	<0.0962	<0.0962	<0.0962	
	01/07/09	<0.0971	<0.0971	<0.0971	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	<0.00485	<0.00485	<0.0971	<0.0971	<0.00485	<2.00	<0.0971	<0.0971		
	03/25/09	<0.0971	<0.0971	<0.0971	<0.0971	<b>0.00727</b>	<b>0.00817</b>	<b>0.0104</b>	<0.0971	<b>0.00944</b>	<b>0.0116</b>	<0.00485	<0.0971	<0.0971	0.00741	<2.00	<0.0971	<0.0971	
	09/23/09	<0.0985	<0.0985	<0.0985	<0.0985	<0.00493	<0.00493	<0.00493	<0.0985	<0.00493	<0.00493	<0.0985	<0.0985	<0.00493	<2.00	<0.0985	<0.0985		
	03/24/10	<0.0957	<0.0957	<0.0957	<0.0957	<0.00478	<0.00478	<0.00478	<0.0957	<0.00478	<0.00478	<0.0957	<0.0957	<0.00478	<2.00	<0.0957	<0.0957		
	09/30/10	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.00476	<0.0952	<0.0952	<0.00476	<2.00	<0.0952	<0.0952		
	03/25/11	<0.0962	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<0.00481	<0.0962	<0.0962	<0.00481	<2.00	<0.0962	<0.0962		
	09/28/12	<0.097	<0.097	<0.097	<0.097	<0.0048													

**TABLE 8**  
**GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA CLUSTER WELLS - PAHs**  
 Willbridge Terminals  
 Portland, Oregon

Well Identification	Date Sampled	2-Methyl-naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo (a) anthracene	Benzo (a) pyrene	Benzo (b) fluoranthene	Benzo (g,h,i) perylene	Benzo (k) fluoranthene	Chrysene	Dibenzo (a,h) anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene	
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	
<b>CR-32A</b>	12/19/07	<0.0990	<b>0.348</b>	<0.149	<0.495	<0.00495	<0.00495	<b>&lt;0.0990</b>	<0.00495	<b>&lt;0.0495</b>	<0.0495	<0.00495	<0.495	<b>1.41</b>	<0.00495	<1.49	<b>0.280</b>	<0.990	
	03/26/08	<0.0995	<b>0.380</b>	<0.0995	<0.0995	<b>&lt;0.0249</b>	<0.00498	<0.00995	<0.0995	<0.00995	<b>&lt;0.0249</b>	<0.00498	<0.0995	<b>1.56</b>	<0.00498	<0.299	<b>0.202</b>	<0.0995	
	06/26/08	<0.0952	<b>0.396</b>	<0.0952	<0.190	<b>0.00625</b>	<0.00476	<0.00476	<0.0952	<0.00476	<b>0.0101</b>	<0.00476	<0.0952	<b>1.41</b>	<0.00476	<0.381	<b>0.445</b>	<0.0952	
	09/24/08	<0.192	<b>0.746</b>	<0.192	<0.192	<b>&lt;0.0192</b>	<0.00962	<0.00962	<0.192	<0.00962	<b>&lt;0.0192</b>	<0.00962	<0.192	<b>2.56</b>	<0.00962	<0.865	<b>0.646</b>	<0.192	
	01/07/09	<0.0985	<b>0.241</b>	<0.0985	<0.0985	<0.00985	<0.00493	<0.00493	<0.0985	<0.00493	<0.00985	<0.00493	<0.0985	<b>1.02</b>	<0.00493	<4.00	<b>0.166</b>	<0.0985	
	03/25/09	<0.0971	<b>0.315</b>	<0.0971	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	<0.00485	<0.00971	<0.00485	<0.0971	<b>1.32</b>	<0.00485	<2.00	<b>0.116</b>	<0.0971	
	09/23/09	<0.0985	<b>0.691</b>	<0.197	<0.197	<0.00985	<0.00493	<0.00493	<0.0985	<0.00493	<0.00985	<0.00493	<0.0985	<b>1.91</b>	<0.00493	<2.00	<b>0.785</b>	<0.0985	
	03/24/10	<0.0952	<b>0.516</b>	<0.143	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.0143	<0.00476	<0.0952	<b>2.24</b>	<0.00476	<2.00	<b>0.252</b>	<0.0952	
	09/30/10	<0.0962	<b>0.563</b>	<0.144	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<b>2.03</b>	<0.00481	<4.00	<b>0.241</b>	<0.0962	
	03/25/11	<0.0962	<b>0.128</b>	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<b>0.365</b>	<0.00481	<2.00	<0.0962	<0.0962	
	09/30/11	<0.0971	<b>0.303</b>	<0.0971	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	<0.00485	<0.00971	<0.00485	<0.0971	<b>0.882</b>	<0.00485	<2.00	<b>0.168</b>	<0.0971	
	09/28/12	<0.097	<b>0.29</b>	<0.097	<0.097	<b>0.0055</b>	<0.0049	<b>0.035 B</b>	<0.097	<0.0049	<b>0.023 B</b>	<0.0049	<0.097	<b>1.1</b>	<0.0049	<0.097	<b>0.20</b>	<0.097	
	09/24/13	<0.29	<0.29	<0.29	<0.29	<0.015	<0.0049	<0.0049	<0.097	<0.0049	<0.015	<0.0049	<0.29	<b>1.1</b>	<0.0049	<0.29	<0.29	<0.29	
	09/04/14	<0.12	<0.12	<0.12	<0.12	<0.0059	<0.0059	<0.0059	<0.12	<0.0059	<0.0059	<0.0059	<0.12	<b>0.21</b>	<0.0059	<0.12	<0.12	<0.12	
<b>CR-32B</b>	01/31/06	<0.0189	<b>0.0824</b>	<0.0189	<0.0189	<b>&lt;0.0189</b>	<b>&lt;0.0189</b>	<b>&lt;0.0189</b>	<0.0189	<b>&lt;0.0189</b>	<b>&lt;0.0189</b>	<b>&lt;0.0189</b>	<0.0189	<b>0.311</b>	<b>&lt;0.0189</b>	<2.00	<b>0.159</b>	<0.0189	
	12/19/07	<0.0995	<0.0995	<0.0995	<0.0995	<0.00498	<0.00498	<0.00498	<0.0995	<0.00498	<0.00498	<0.0995	<0.0995	<0.00498	<0.0995	<0.0995	<0.0995	<0.0995	
	03/27/08	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	0.00567	<0.00476	<0.0952	<0.0952	<0.00476	<0.0952	<0.0952	<0.0952	
	06/26/08	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.00476	<0.0952	<0.0952	<0.00476	<0.0952	<0.0952	<0.0952	<0.0952	
	09/24/08	<0.0962	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<0.0962	<0.0962	<0.0962	<0.0962	
	01/08/09	<0.0966	<0.0966	<0.0966	<0.0966	<0.00483	<0.00483	<0.00483	<0.0966	<0.00483	<0.00483	<0.00483	<0.0966	<0.00483	<0.0966	<2.00	<0.0966	<0.0966	
	03/25/09	<0.0971	<0.0971	<0.0971	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	<0.00485	<0.00485	<0.0971	<0.00485	<0.0971	<0.00485	<2.00	<0.0971	<0.0971	
	09/23/09	<0.0980	<0.0980	<0.0980	<0.0980	<0.00490	<0.00490	<0.00490	<0.0980	<0.00490	<0.00490	<0.0980	<0.00490	<0.0980	<0.00490	<2.00	<0.0980	<0.0980	
	03/24/10	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.00476	<0.0952	<0.0952	<0.00476	<0.0952	<0.00476	<0.0952	<0.0952	
	09/30/10	<0.0957	<0.0957	<0.0957	<0.0957	<0.00478	<0.00478	<0.00478	<0.0957	<0.00478	<0.00478	<0.0957	<0.0957	<0.00478	<0.0957	<0.00478	<2.00	<0.0957	<0.0957
	03/25/11	<0.0962	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<0.00481	<0.0962	<0.0962	<0.00481	<0.0962	<0.00481	<2.00	<0.0962	<0.0962
	09/28/12	<0.096	<0.096	<0.096	<0.096	<b>0.017</b>	<0.0048	<b>0.0067 B</b>	<0.096	<b>0.0085 B</b>	<b>0.0068 B</b>	<b>0.0093 B</b>	<0.096	<0.096	<0.096	<b>0.018 B</b>	<0.096	<0.096	<0.096
	09/24/13	<0.097	<0.097	<0.097	<0.097	<0.0049	&lt												

**TABLE 8**  
**GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA CLUSTER WELLS - PAHs**

Willbridge Terminals  
Portland, Oregon

Well Identification	Date Sampled	2-Methyl-naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo (a) anthracene	Benzo (a) pyrene	Benzo (b) fluoranthene	Benzo (g,h,i) perylene	Benzo (k) fluoranthene	Chrysene	Dibenzo (a,h) anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene		
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)		
<b>CR-32C</b>	01/31/06	<0.0189	<0.0189	<0.0189	<0.0189	<0.0189	<0.0189	<0.0189	<0.0189	<0.0189	<0.0189	<0.0189	<0.0189	<0.0189	<2.00	<0.0189	<0.0189			
	12/19/07	<0.0995	<0.0995	<0.0995	<0.0995	<b>0.0192</b>	<b>0.0250</b>	<b>0.0347</b>	<0.0995	<b>0.0307</b>	<b>0.0340</b>	<b>0.00718</b>	<0.0995	<0.0995	<b>0.0212</b>	<0.0995	<0.0995	<0.0995		
	03/26/08	<0.0985	<0.0985	<0.0985	<0.0985	<b>0.0209</b>	<b>0.0175</b>	<b>0.0333</b>	<0.0985	<b>0.0173</b>	<b>0.0253</b>	<b>0.00628</b>	<0.0985	<0.0985	<b>0.0190</b>	<0.0985	<0.0985	<0.0985		
	06/26/08	<0.0952	<0.0952	<0.0952	<0.0952	<b>0.00614</b>	<b>0.00780</b>	<b>0.00869</b>	<0.0952	<b>0.00884</b>	<b>0.00964</b>	<0.00476	<0.0952	<0.0952	<b>0.00737</b>	<0.0952	<0.0952	<0.0952		
	09/24/08	<0.0962	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<0.00481	<0.0962	<0.0962	<0.00481	<0.0962	<0.0962	<0.0962	<0.0962		
	01/07/09	<0.100	<0.100	<0.100	<0.100	<b>0.00520</b>	<b>0.00502</b>	<b>0.00620</b>	<0.100	<b>0.00584</b>	<b>0.00868</b>	<0.00500	<0.100	<0.100	<0.00500	<2.00	<0.100	<0.100		
	03/25/09	<0.0971	<0.0971	<0.0971	<0.0971	<b>0.00537</b>	<b>0.00643</b>	<b>0.00827</b>	<0.0971	<b>0.00906</b>	<b>0.00955</b>	<0.00485	<0.0971	<0.0971	<b>0.00571</b>	<2.00	<0.0971	<0.0971		
	09/23/09	<0.100	<0.100	<0.100	<0.100	<0.00500	<0.00500	<0.00500	<0.100	<0.00500	<0.00500	<0.100	<0.100	<0.00500	<2.00	<0.100	<0.100			
	03/24/10	<0.0952	<0.0952	<0.0952	<0.0952	<b>0.00527</b>	<b>0.00489</b>	<b>0.00658</b>	<0.0952	<b>0.00592</b>	<b>0.00872</b>	<0.00476	<0.0952	<0.0952	<b>0.00530</b>	<2.00	<0.0952	<0.0952		
	09/30/10	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.00476	<0.0952	<0.0952	<0.00476	<2.00	<0.0952	<0.0952			
	03/25/11	<0.0962	<0.0962	<0.0962	<0.0962	<b>0.0209</b>	<b>0.0211</b>	<b>0.0292</b>	<0.0962	<b>0.0275</b>	<b>0.0437</b>	<b>0.00776</b>	<b>0.112</b>	<0.0962	<b>0.0203</b>	<2.00	<0.0962	<0.0962		
	09/28/12	<0.097	<0.097	<0.097	<0.097	<0.0048	<0.0048	<b>0.015 B</b>	<0.097	<b>0.011 B</b>	<b>0.010 B</b>	<0.0048	<0.097	<0.097	<b>0.0056 B</b>	<0.097	<0.097	<0.097		
	09/24/13	<0.098	<0.098	<0.098	<0.098	<0.0049	<0.0049	<0.0049	<0.098	<0.0049	<0.0049	<0.098	<0.098	<0.0049	<0.098	<0.098	<0.098			
	09/04/14	<0.11	<0.11	<0.11	<0.11	<0.0056	<0.0056	<0.0056	<0.11	<0.0056	<0.0056	<0.11	<0.11	<0.0056	<0.11	<0.11	<0.11			
<b>KINDER MORGAN</b>																				
<b>MW 41B</b>	01/23/08	<b>0.058</b>	-	<0.0034	-	<0.0026	<0.0043	-	<0.0029	<0.0025	<0.0034	<0.0025	-	<b>0.014</b>	<0.0026	<b>0.14</b>	-	<b>0.0052</b>		
dup	01/23/08	<b>0.054</b>	-	<0.0036	-	<0.0027	<0.0045	-	<0.0030	<0.0026	<0.0036	<0.0026	-	<b>0.017</b>	<0.0027	<b>0.13</b>	-	<0.0037		
	03/25/08	<b>0.010</b>	<0.0044	<0.0034	<0.0036	<0.0026	<0.0043	<0.0023	<0.0029	<0.0025	<0.0034	<0.0025	<0.0044	<0.0038	<0.0026	<b>0.011</b>	<0.0050	<0.0035		
	06/24/08	<b>0.0063</b>	<0.0044	<0.0034	<b>0.0076</b>	<b>0.0038</b>	<0.0043	<0.0023	<b>0.0031</b>	<0.0025	<0.0034	<0.0025	<0.0044	<0.0044	<b>0.0077</b>	<0.0026	<b>0.058</b>	<b>0.011</b>	<b>0.0036</b>	
dup	06/24/08	<b>0.0074</b>	<0.0044	<0.0034	<0.0036	<0.0026	<0.0043	<0.0023	<0.0029	<0.0025	<0.0034	<0.0025	<0.0044	<0.0044	<0.0038	<0.0026	<b>0.036</b>	<0.0050	<0.0035	
	09/23/08	<b>0.0072</b>	<0.0044	<0.0034	<0.0036	<0.0026	<0.0043	<0.0023	<0.0029	<0.0025	<0.0034	<0.0025	<0.0044	<0.0044	<b>0.0062</b>	<0.0026	<b>0.046</b>	<0.0050	<0.0035	
	01/05/09	<0.0930	<0.0930	<0.0930	<0.0930	<0.00465	<0.00465	<0.00465	<0.0930	<0.00465	<0.00465	<0.0930	<0.0930	<0.00465	<0.0930	<0.0930	<0.0930	<0.0930		
<b>MW 41C</b>	01/23/08	<b>0.012</b>	-	<0.0034	-	<0.0026	<0.0043	-	<0.0029	<0.0025	<0.0034	<0.0025	-	<b>0.013</b>	<0.0026	<b>0.018</b>	-	<0.0035		
	03/25/08	<b>0.012</b>	<0.0044	<0.0034	<0.0036	<0.0026	<0.0043	<0.0023	<0.0029	<0.0025	<0.0034	<0.0025	<0.0044	<0.0044	<0.0038	<0.0026	<b>0.024</b>	<0.0050	<0.0035	
	06/24/08	<0.0023	<0.0044	<0.0034	<0.0036	<0.0026	<0.0043	<0.0023	<b>0.0042</b>	<0.0025	<0.0034	<0.0025	<0.0044	<0.0044	<0.0038	<0.0026	<b>0.028</b>	<b>0.032</b>	<0.0050	<0.0035
	09/23/08	<0.0023	<0.0044	<0.0034	<0.0036	<0.0026	<0.0043	<0.0023	<0.0029	<0.0025	<0.0034	<0.0025	<0.0044	<0.0044	<0.0038	<0.0026	<b>0.017</b>	<0.0030	<0.0050	<0.0035
	01/05/09	<0.0909	<0.0909	<0.0909	<0.0909	<0.00455	<0.00455	<0.00455	<0.0909	<0.00455	<0.00455	<0.0909	<0.0909	<0.00455	<0.0909	<0.0909	<0.0909	<0.0909		
<b>MW 42B</b>	01/23/08	<b>0.0028</b>	-	<0.0034	-	<b>0.0041</b>	<0.0043	-	<0.0029	<0.002										

**TABLE 8**  
**GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA CLUSTER WELLS - PAHs**  
 Willbridge Terminals  
 Portland, Oregon

Well Identification	Date Sampled	2-Methyl-naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo (a) anthracene	Benzo (a) pyrene	Benzo (b) fluoranthene	Benzo (g,h,i) perylene	Benzo (k) fluoranthene	Chrysene	Dibenzo (a,h) anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)
<b>PHILLIPS</b>																		
U-29B	01/29/08	<b>6.69</b>	<b>0.286</b>	<0.143	<0.0952	<b>0.0143</b>	<b>0.0107</b>	<b>0.0110</b>	<0.0952	<b>0.0110</b>	<b>0.0208</b>	<0.00476	<0.0952	<b>1.28</b>	<b>0.0059</b>	<1.90	<b>1.14</b>	<0.0952
	03/26/08	<b>1.23</b>	<b>0.163</b>	<0.0962	<0.0962	<b>0.0113</b>	<b>0.0138</b>	<b>0.0125</b>	<0.192	<0.00962	<b>0.0162</b>	<0.00962	<0.0962	<b>0.257</b>	<b>0.0104</b>	<0.192	<0.0962	<0.0962
	06/25/08	<b>0.224</b>	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<0.0962	<0.0962	<0.0962	<0.0962
	09/24/08	<b>0.230</b>	<b>0.103</b>	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<b>0.00683</b>	<0.00481	<0.0962	<b>0.145</b>	<0.00481	<0.144	<0.0962	<0.0962
dup	09/24/08	<b>0.457</b>	<b>0.110</b>	<0.0962	<0.0962	<b>0.00917</b>	<b>0.0111</b>	<b>0.00688</b>	<0.0962	<b>0.00647</b>	<b>0.0126</b>	<0.00481	<0.0962	<b>0.157</b>	<b>0.00651</b>	<0.144	<b>0.107</b>	<0.0962
	01/07/09	<b>0.413</b>	<0.0976	<0.0976	<0.0976	<0.00488	<0.00488	<0.00488	<0.0976	<0.00488	<0.00488	<0.0976	<b>0.116</b>	<0.00488	<0.146	<b>0.104</b>	<0.0976	
dup	01/07/09	<0.0976	<0.0976	<0.0976	<0.0976	<0.00488	<0.00488	<0.00488	<0.0976	<0.00488	<0.00488	<0.0976	<0.0976	<0.00488	<0.0976	<0.0976	<0.0976	
	03/19/09	<0.0962	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<0.00481	<0.0962	<0.0962	<0.00481	<0.0962	<0.0962	<0.0962	
dup	03/19/09	<0.0985	<0.0985	<0.0985	<0.0985	<0.00493	<0.00493	<0.00493	<0.0985	<0.00493	<0.00493	<0.0985	<0.0985	<0.00493	<0.0985	<0.0985	<0.0985	
	09/17/09	<0.0971	<0.0971	<0.0971	<0.0971	<0.00485	<0.00485	<0.00485	<0.0971	<0.00485	<0.00485	<0.0971	<0.0971	<0.00485	<0.0971	<0.0971	<0.0971	
	03/18/10	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.00476	<0.0952	<b>0.0994</b>	<0.00476	<0.0952	<0.0952	<0.0952	
	09/28/10	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.00476	<0.0952	<0.0952	<0.00476	<0.0952	<0.0952	<0.0952	
	03/22/11	<0.0962	<0.0962	<0.0962	<0.0962	<0.00481	<0.00481	<0.00481	<0.0962	<0.00481	<0.00481	<0.0962	<0.0962	<0.00481	<0.0962	<0.0962	<0.0962	
	09/29/11	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.00476	<0.0952	<0.0952	<b>0.00529</b>	<0.0952	<0.0952	<0.0952	
	03/27/12	<0.048	<0.048	<0.048	<0.048	<0.0048	<0.0048	<0.0048	<0.048	<0.0048	<0.0048	<0.048	<b>0.067 J</b>	<0.0048	<0.048	<0.048	<0.048	
U-29C	01/29/08	<b>0.191</b>	<0.0952	<0.0952	<0.0952	<b>0.033</b>	<b>0.0433</b>	<b>0.0421</b>	<0.00476	<b>0.0288</b>	<b>0.0393</b>	<b>0.00503</b>	<0.0952	<0.0952	<b>0.0239</b>	<b>0.195</b>	<0.0952	<0.476
	03/26/08	<0.0962	<0.0962	<0.0962	<0.0962	<0.00962	<0.00962	<0.00962	<0.192	<0.00962	<0.00962	<0.0962	<0.0962	<0.00962	<0.0962	<0.0962	<0.0962	
	06/25/08	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<b>0.00483</b>	<0.00476	<0.0952	<0.0952	<0.00476	<0.0952	<0.0952	
	09/23/08	<0.0952	<0.0952	<0.0952	<0.0952	<0.00476	<0.00476	<0.00476	<0.0952	<0.00476	<0.00476	<0.0952	<0.0952	<0.00476	<0.0952	<0.0952		
	01/07/09	<0.0985	<0.0985	<0.0985	<0.0985	<0.00493	<0.00493	<0.00493	<0.0985	<0.00493	<b>0.00531</b>	<0.00493	<0.0985	<0.0985	<0.00493	<0.0985	<0.0985	
<b>Portland Harbor Joint Source Control Screening Level Values (µg/L)</b>																		
EPA's 2004 NRWQC (organism only)	-	990	-	40000	0.018	0.018	0.018	-	0.018	0.018	0.018	140	5300	0.018	-	-	4000	
DEQ's 2004 AWQC (organism only)	-	990	-	40000	0.018	0.018	0.018	-	0.018	0.018	0.018	140	5300	0.018	-	-	4000	
EPA's 2004 NRWQC ecological receptors (chronic)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
DEQ's 2004 AWQC ecological receptors (chronic)	-	520	-	-	-	-	-	-	-	-	-	-	-	-	620	-	-	

**TABLE 8**  
**GROUNDWATER SCREENING LEVEL COMPARISONS - DOCK AREA CLUSTER WELLS - PAHs**

Willbridge Terminals  
 Portland, Oregon

Well Identification	Date Sampled	2-Methyl-naphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo (a) anthracene	Benzo (a) pyrene	Benzo (b) fluoranthene	Benzo (g,h,i) perylene	Benzo (k) fluoranthene	Chrysene	Dibenzo (a,h) anthracene	Fluoranthene	Fluorene	Indeno (1,2,3-cd) pyrene	Naphthalene	Phenanthrene	Pyrene
		(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	

**NOTES:**

Data collected prior to 4Q11 are presented as they were reported by previous consultants

J=result is less than reporting limit but greater than or equal to the method detection limit and the concentration is an approximate value

B=compound was found in the blank sample

\*=Relative Percent was difference lab control sample and lab control sample duplicate exceed the control limits

µg/l = micrograms per Liter

<0.00985 = Analyte not detected above the laboratory method reporting limit (MRL) of 0.00985 µg/L

Screening Level Values (SLVs) taken from Table 3-1 of the Portland Harbor Joint Source Control Strategy (JSCS) guidance document, dated December 2005.

DEQ = Oregon Department of Environmental Quality

EPA = United States Environmental Protection Agency

NRWQC = National Recommended Water Quality Criteria

AWQC = Ambient Water Quality Criteria

**Shading** indicates analyte detections or laboratory MRLs were above the applicable screening levels presented in Table 3-1 of the Portland Harbor JSCS guidance document, dated December 2005 and revised in July 2007.

**Bold** face font indicates analyte was detected above the laboratory MRL or MDL

NA = Not analyzed

NS = Not sampled

N/A = Not applicable

ND = Not detected

PAHs = Polynuclear Aromatic Hydrocarbons

**TABLE 9**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA - WILLBRIDGE TERMINAL GROUP SUMMARY**  
 Willbridge Terminals  
 Portland, Oregon

Well ID	Gauging Date	SPH Thickness (feet)	SPH Recovery (gallons)
<b>CHEVRON</b>			
B-7	12/17/2007	trace	-
	1/21/2008	trace	-
B-10	12/17/2007	trace	-
	1/21/2008	0.01	-
	9/22/2008	0.01	-
B-14	12/17/2007	0.02	-
	1/21/2008	trace	-
B-20	5/22/2008	0.01	sheen
	6/23/2008	0.01	-
	7/21/2008	0.01	sheen
	8/22/2008	0.01	sheen
	10/21/2008	0.01	0.00
	1/5/2009	0.09	0.00
	9/14/2009	0.03	0.00
	10/30/2009	0.01	0.00
	12/21/2009	0.01	0.00
	3/26/2014	0.01	0.05
	8/26/2014	0.03	0.00
B-24	12/17/2007	0.03	-
	1/21/2008	0.03	-
	3/24/2008	0.03	-
	6/23/2008	0.03	-
	7/21/2008	0.01	sheen
	9/22/2008	0.24	-
	6/15/2009	0.01	0.00
B-30	12/17/2007	0.04	-
	1/21/2008	0.02	-
	3/24/2008	0.01	-
	6/23/2008	0.01	-
	7/21/2008	0.03	sheen
	8/29/2008	0.01	-
	9/22/2008	0.01	-
	10/21/2008	0.01	0.00
	1/5/2009	0.01	0.00
	3/16/2009	0.02	0.00
	6/15/2009	0.03	0.00
	9/14/2009	0.01	0.00
	10/30/2009	0.01	0.00
	12/21/2009	0.01	0.00
CR-4A	12/16/2014	0.15	0.03
CR-6	6/23/2008	0.01	-
	9/22/2008	0.04	-
	1/5/2009	0.07	0.00
	3/16/2009	0.05	0.00
	6/15/2009	0.05	0.00
	9/14/2009	0.04	0.00
	10/30/2009	0.04	0.00
	12/21/2009	0.03	0.00
CR-8 Sump	8/29/2008	trace	-
CR-10	10/2/2007	0.37	0.66
	11/30/2007	0.18	0.30
	12/7/2007	0.06	-
	1/28/2008	0.02	0.03
	2/8/2008	Not Measured	0.00
	3/24/2008	0.04	0.05
	5/22/2008	0.04	0.01

**TABLE 9**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA - WILLBRIDGE TERMINAL GROUP SUMMARY**  
 Willbridge Terminals  
 Portland, Oregon

	6/23/2008	0.04	-
	7/21/2008	0.01	sheen
	8/29/2008	0.15	0.16
	9/22/2008	0.23	0.13
	10/21/2008	0.01	0.00
	1/5/2009	0.09	0.40
	3/16/2009	0.04	0.03
	4/21/2009	NM	0.03
	6/25/2009	0.05	0.05
	10/30/2009	0.01	0.00
	12/21/2009	0.56	0.00
	1/29/2010	0.57	0.37
	4/27/2010	NM	0.03
	7/30/2010	NM	0.03
	9/20/2010	0.08	0.05
	11/30/2010	NM	0.08
	7/19/2011	0.06	0.04
	12/1/2011	0.26	0.11
	1/25/2012	0.08	0.07
	2/23/2012	0.01	0.01
	10/26/2012	0.14	0.16
	12/18/2012	0.02	0.03
	3/13/2013	0.00	0.01
	6/25/2013	0.02	0.03
	10/8/2013	0.13	0.05
	1/8/2014	0.05	0.08
	6/26/2014	0.05	0.05
	3/27/2015	0.44	0.28
	<b>6/10/2015</b>	<b>0.04</b>	0.03
<b>CR-12</b>	3/24/2008	0.01	-
<b>CR-15</b>	10/2/2007	0.06	0.03
	11/30/2007	0.00	0.00
	12/7/2007	0.10	-
	1/28/2008	0.21	0.16
	2/8/2008	Not Measured	0.00
	3/24/2008	0.23	0.13
	4/25/2008	0.20	0.17
	5/22/2008	0.17	0.09
	6/23/2008	0.11	0.11
	7/21/2008	0.01	sheen
	8/29/2008	0.05	0.13
	1/5/2009	0.01	0.04
	3/16/2009	0.13	0.00
	4/21/2009	NM	0.13
	6/25/2009	0.15	0.03
	9/14/2009	0.11	0.08
	10/30/2009	0.10	0.13
	12/21/2009	0.24	0.01
	2/27/2010	0.35	0.21
	3/26/2010	0.35	0.33
	4/27/2010	NM	0.26
	5/28/2010	NM	0.07
	6/21/2010	0.23	0.17
	7/30/2010	NM	0.08
	8/30/2010	NM	0.09
	9/20/2010	0.08	0.04
	11/30/2010	NM	0.08
	1/28/2011	NM	0.11
	3/30/2011	0.22	0.04
	4/27/2011	0.17	0.07

**TABLE 9**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA - WILLBRIDGE TERMINAL GROUP SUMMARY**  
 Willbridge Terminals  
 Portland, Oregon

	5/25/2011	0.14	0.07
	6/8/2011	0.09	0.05
	7/19/2011	0.11	0.03
	12/1/2011	0.1	0.08
	1/25/2012	0.06	0.01
	2/23/2012	0.12	0.02
	10/26/2012	0.1	0.05
	12/18/2012	0.13	0.07
	3/13/2013	0.1	0.05
	6/25/2013	0.14	0.10
	10/8/2013	0.15	0.03
	1/8/2014	0.1	0.10
	3/26/2014	0.09	0.08
	6/26/2014	0.07	0.04
	9/30/2014	0.19	0.02
	12/16/2014	0.05	0.02
	3/27/2015	0.15	0.2
	<b>6/10/2015</b>	<b>0.04</b>	0.01
<b>CR-19</b>	10/7/2007	trace	0.00
	11/30/2007	0.00	0.00
	12/7/2007	1.03	-
	1/28/2008	1.80	0.60
	2/8/2008	Not Measured	0.00
	3/24/2008	0.06	0.11
	4/25/2008	0.77	0.34
	5/22/2008	0.28	0.12
	6/23/2008	0.21	0.11
	8/29/2008	0.01	-
	9/22/2008	0.48	0.07
	10/21/2008	0.42	0.00
	1/5/2009	0.09	0.30
	3/16/2009	0.55	0.42
	4/21/2009	NM	0.02
	6/25/2009	0.44	0.09
	9/14/2009	0.22	0.11
	10/30/2009	0.32	0.12
	12/21/2009	Not Measured	0.28
	3/26/2010	0.07	0.05
	5/28/2010	Not Measured	0.11
	8/30/2010	Not Measured	0.04
	9/20/2010	0.11	0.01
	1/28/2011	Not Measured	0.01
	6/8/2011	0.06	0.01
	7/19/2011	0.15	0.03
	12/1/2011	0.12	0.08
	10/26/2012	0.31	0.11
	6/25/2013	0.63	0.15
	10/8/2013	0.35	0.08
	1/8/2014	0.49	0.13
	6/26/2014	0.41	0.09
	9/30/2014	0.26	0.07
	12/16/2014	0.04	0.03
	3/27/2015	0.03	0.01
	<b>6/10/2015</b>	<b>0.54</b>	<b>0.21</b>
<b>CR-21A</b>	10/7/2007	trace	0.03
	11/30/2007	trace	0.00
	12/7/2007	Not Accessible	-
	1/28/2008	0.20	0.02
	2/8/2008	Not Measured	0.00
	3/24/2008	0.05	0.07

**TABLE 9**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA - WILLBRIDGE TERMINAL GROUP SUMMARY**  
 Willbridge Terminals  
 Portland, Oregon

	7/17/2013	0.37	0.02
	9/30/2014	0.05	0.00
<b>CR-23A</b>	<b>6/10/2015</b>	<b>0.27</b>	-
<b>CR24B</b>	3/16/2009	trace	0.00
	7/17/2013	0.00	0.00
<b>CR-25</b>	10/7/2007	trace	0.00
	11/30/2007	0.18	0.07
	12/7/2007	0.07	-
	1/28/2008	0.11	0.07
	2/8/2008	Not Measured	0.00
	3/24/2008	0.09	0.03
	4/25/2008	0.10	0.03
	5/22/2008	0.01	sheen
	6/23/2008	0.05	0.03
	7/21/2008	0.06	0.04
	8/29/2008	0.04	0.08
	9/22/2008	0.08	0.03
	10/21/2008	0.09	0.00
	1/5/2009	0.05	0.05
	3/16/2009	0.09	0.03
	6/25/2009	0.12	0.02
	9/14/2009	0.02	0.00
	10/30/2009	0.06	0.00
	12/21/2009	0.06	0.01
	5/28/2010	Not Measured	0.02
	6/21/2010	0.08	0.03
	7/30/2010	Not Measured	0.03
	1/25/2012	0.05	0.01
	2/23/2012	0.06	0.03
	3/13/2013	0.00	0.01
	6/25/2013	0.02	0.00
	1/8/2014	0.02	0.03
<b>GPW-1</b>	3/16/2009	0.01	0.00
<b>GPW-2</b>	3/24/2008	0.47	-
	6/23/2008	0.12	0.05
	9/22/2008	0.18	0.01
	1/5/2009	0.01	0.01
	3/16/2009	0.34	0.10
	9/14/2009	0.00	0.01
	10/30/2009	0.04	0.00
	12/21/2009	0.05	0.00
<b>GPW-3</b>	3/24/2008	0.01	-
	1/5/2009	0.09	0.00
<b>GPW-4</b>	3/24/2008	0.02	-
	6/15/2009	0.09	-
	9/14/2009	0.04	-
	10/30/2009	0.02	0.00
	12/21/2009	0.05	0.00
<b>GPW-5</b>	12/21/2009	0.01	0.00
<b>PHILLIPS</b>			
<b>B-4</b>	10/30/2007	0.00	sheen
	11/28/2007	0.00	0.01
	12/17/2007	0.00	0.00
	1/22/2008	0.00	0.00
	2/28/2008	0.00	0.00
	3/24/2008	0.00	0.00
	3/16/2009	0.02	0.00
	7/27/2009	0.01	0.00
	8/31/2009	Trace	0.00

**TABLE 9**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA - WILLBRIDGE TERMINAL GROUP SUMMARY**  
 Willbridge Terminals  
 Portland, Oregon

	9/14/2009	0.01	0.00
	12/21/2009	0.01	0.00
<b>B-27</b>	10/30/2007	0.00	0.00
	11/28/2007	0.00	0.00
	12/17/2007	0.00	0.00
	1/22/2008	0.00	0.00
	2/28/2008	0.00	0.00
	3/24/2008	0.00	0.00
	3/16/2009	0.06	0.00
	3/16/2010	1.19	0.50
	6/21/2010	1.40	0.23
	9/20/2010	0.45	0.08
	6/15/2011	2.57	4.0
	11/4/2011	0.32	0.5
	4/25/2012	0.22	0.7
	6/26/2012	0.40	0.1
	12/18/2012	0.26	0.1
	3/13/2013	0.99	0.2
	6/25/2013	0.01	0.0
	6/26/2014	0.17	0.03
	<b>3/27/2015</b>	<b>1.14</b>	<b>0.16</b>
<b>B-38</b>	6/25/2013	0.04	0.01
<b>B-40</b>	10/30/2007	0.00	0.00
	11/28/2007	0.00	0.00
	12/17/2007	0.04	0.00
	1/22/2008	0.01	sheen
	2/28/2008	0.00	0.00
	3/24/2008	0.00	0.00
	9/22/2008	0.10	0.02
	1/5/2009	0.44	-
	3/16/2009	0.57	0.20
	8/31/2009	0.01	0.00
	10/26/2012	0.34	0.07
	6/25/2013	0.14	0.04
<b>GP-3</b>	8/22/2008	0.27	0.01
	9/22/2008	0.23	0.01
	1/5/2009	0.01	0.00
	9/14/2009	0.01	0.00
	12/21/2009	0.02	0.00
<b>GP-4</b>	8/22/2008	0.18	0.01
<b>U-4</b>	10/30/2007	0.00	0.00
	11/28/2007	0.00	0.00
	12/17/2007	0.00	0.00
	1/22/2008	0.00	0.00
	2/28/2008	0.00	0.00
	3/24/2008	0.05	sheen
	8/22/2008	0.11	0.07
	6/15/2009	0.05	0.03
	9/18/2009	0.02	0.01
	3/16/2010	0.06	0.20
	6/21/2010	0.10	0.07
	9/20/2010	0.21	0.14
	6/15/2011	sheen	0.00
	2/3/2012	0.04	0.00
	11/4/2011	0.05	0.25
	10/26/2012	0.07	0.13
	6/25/2013	0.02	0.01
	10/8/2013	0.02	0.01
	12/12/2013	0.02	0.01
	3/26/2014	0.02	0.01

**TABLE 9**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA - WILLBRIDGE TERMINAL GROUP SUMMARY**  
 Willbridge Terminals  
 Portland, Oregon

<b>U-5A</b>	10/30/2007	0.00	0.01
	11/28/2007	0.00	0.01
	12/17/2007	0.00	0.01
	1/22/2008	0.04	0.01
	2/28/2008	0.05	0.01
	3/24/2008	0.10	0.03
	9/22/2008	0.15	0.10
	9/18/2009	0.13	0.08
	6/21/2010	0.04	0.03
	9/20/2010	0.62	0.40
	6/15/2011	0.15	0.50
	11/4/2011	0.50	0.00
	2/3/2012	0.13	0.00
	4/25/2012	0.00	0.21
	6/26/2012	-	0.26
	10/26/2012	0.07	0.08
	12/18/2012	0.22	0.26
	3/13/2013	0.00	0.15
	6/25/2013	0.12	0.08
	10/8/2013	0.51	0.07
	12/12/2013	0.03	0.03
	3/26/2014	0.54	0.34
	6/26/2014	0.22	0.29
	9/30/2014	0.20	0.23
	12/16/2014	0.03	0.13
	3/27/2015	0.17	0.16
	<b>6/10/2015</b>	<b>0.21</b>	<b>0.13</b>
<b>U-13</b>	10/30/2007	0.11	0.02
	11/28/2007	0.00	0.00
	12/17/2007	0.11	0.05
	1/22/2008	0.11	0.10
	2/28/2008	0.08	0.02
	3/24/2008	0.05	0.01
	6/16/2008	0.00	0.01
	8/22/2008	0.10	0.02
	9/22/2008	0.12	0.02
	1/5/2009	0.28	0.00
	3/17/2009	0.24	2.00
	6/15/2009	0.23	0.04
	9/18/2009	0.15	0.03
	12/21/2009	0.39	0.10
	3/16/2010	0.72	1.00
	6/21/2010	0.76	2.5
	9/20/2010	0.63	0.1
	6/15/2011	0.12	0.5
	11/4/2011	0.05	0.3
	2/3/2012	0.12	0.00
<b>U-15</b>	3/17/2009	sheen	0.00
<b>U-17</b>	6/15/2009	0.01	0.01
<b>U-29A</b>	6/16/2008	0.00	0.01
	8/22/2008	0.02	sheen
<b>KINDER MORGAN</b>			
<b>MW-6</b>	10/30/2007	0.00	0.01
	11/29/2007	0.00	0.01
	12/28/2007	0.00	sheen
	1/22/2008	0.00	sheen
	2/26/2008	0.00	0.01
	3/31/2008	0.01	0.02
	4/17/2008	0.00	0.02
	5/29/2008	0.00	sheen

**TABLE 9**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA - WILLBRIDGE TERMINAL GROUP SUMMARY**  
 Willbridge Terminals  
 Portland, Oregon

	6/23/2008	sheen	sheen
	8/26/2008	0.03	0.02
	9/29/2008	sheen	0.01
	10/20/2008	0.00	sheen
	11/25/2008	sheen	sheen
	12/30/2008	0.00	0.01
	1/30/2009	0.00	0.01
	2/26/2009	0.00	0.01
	3/26/2009	0.00	0.01
	4/21/2009	0.00	sheen
	5/21/2009	0.00	0.01
	6/15/2009	sheen	sheen
	7/31/2009	0.00	sheen
	8/27/2009	0.01	0.02
	9/14/2009	0.00	sheen
	10/29/2009	sheen	sheen
	11/23/2009	sheen	0.05
	12/21/2009	0.00	sheen
	2/25/2010	sheen	sheen
	3/16/2010	sheen	0.01
	4/29/2010	0.00	sheen
	6/21/2010	0.00	sheen
	9/20/2010	sheen	sheen
	10/29/2010	sheen	sheen
	11/30/2010	0.00	sheen
	12/14/2010	0.00	sheen
	1/25/2011	sheen	sheen
	2/23/2011	0.00	0.00
	4/27/2011	sheen	sheen
	5/25/2011	0.00	sheen
	6/8/2011	0.00	sheen
	7/28/2011	sheen	sheen
	8/26/2011	sheen	sheen
	9/26/2011	0.01	sheen
	7/31/2013	sheen	0.00
	8/28/2013	sheen	0.00
	9/9/2013	sheen	absorbent sock replaced
	10/31/2013	0.00	0.00
	11/27/2013	0.00	0.00
	1/31/2014	0.00	0.00
	2/27/2014	sheen	0.00
	<b>1/30/2015</b>	<b>0.01</b>	<b>0.01</b>
	<b>2/26/2015</b>	<b>0.01</b>	<b>0.01</b>
	<b>3/3/2015</b>	<b>0.01</b>	<b>0.01</b>
<b>MW-7</b>	10/30/2007	0.33	0.25
	11/29/2007	0.09	0.20
	12/28/2007	0.14	0.30
	1/22/2008	0.03	0.01
	2/26/2008	0.05	0.10
	3/31/2008	0.05	0.10
	4/17/2008	0.11	0.10
	5/29/2008	0.16	0.05
	6/23/2008	0.19	0.10
	8/26/2008	0.16	0.05
	9/29/2008	0.25	0.05
	10/20/2008	0.07	0.15
	11/25/2008	0.13	0.10
	12/30/2008	0.02	0.75
	1/30/2009	0.04	0.02
	2/26/2009	0.00	0.00

**TABLE 9**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA - WILLBRIDGE TERMINAL GROUP SUMMARY**  
 Willbridge Terminals  
 Portland, Oregon

	3/26/2009	0.02	0.02
	4/21/2009	0.03	sheen
	5/21/2009	0.01	0.02
	6/15/2009	0.15	0.05
	7/31/2009	0.12	0.02
	8/27/2009	0.08	0.03
	9/14/2009	0.06	0.02
	10/29/2009	0.08	0.10
	11/23/2009	sheen	sheen
	12/21/2009	sheen	sheen
	1/29/2010	0.01	0.01
	2/25/2010	0.01	sheen
	3/16/2010	sheen	0.01
	4/29/2010	0.01	sheen
	6/21/2010	sheen	sheen
	8/30/2010	0.02	0.01
	9/20/2010	sheen	sheen
	11/30/2010	sheen	sheen
	12/14/2010	sheen	sheen
	1/25/2011	0.01	0.10
	2/23/2011	0.00	sheen
	3/21/2011	sheen	sheen
	4/27/2011	sheen	sheen
	5/25/2011	sheen	sheen
	6/8/2011	0.00	sheen
	7/28/2011	sheen	sheen
	8/26/2011	sheen	sheen
	9/26/2011	Sheen	sheen
	10/30/2012	sheen	no action
	7/31/2013	0.02	0.01
	8/28/2013	0.04	0.01
	9/9/2013	sheen	absorbent sock replaced
	10/31/2013	sheen	0.00
	11/27/2013	sheen	0.00
	1/31/2014	sheen	0.00
	2/27/2014	0.00	0.00
	8/26/2014	0.01	0.01
	<b>1/30/2015</b>	<b>0.01</b>	<b>0.01</b>
	<b>2/26/2015</b>	<b>0.01</b>	<b>0.01</b>
<b>MW-11</b>	9/14/2009	0.06	0.00
<b>MW-19</b>	10/30/2007	0.00	0.01
	11/29/2007	0.00	0.01
	12/28/2007	0.00	sheen
	1/22/2008	0.00	sheen
	2/26/2008	0.00	sheen
	3/31/2008	0.00	sheen
	4/17/2008	0.00	0.00
	5/29/2008	0.02	sheen
	6/23/2008	0.02	sheen
	8/26/2008	sheen	0.00
	9/29/2008	sheen	0.01
	10/20/2008	0.01	0.02
	11/25/2008	sheen	sheen
	12/30/2008	0.00	0.01
	1/30/2009	0.02	0.01
	2/26/2009	0.00	0.01
	3/26/2009	0.00	0.01
	4/21/2009	0.00	0.01
	6/15/2009	0.04	sheen
	7/31/2009	0.03	0.02

**TABLE 9**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA - WILLBRIDGE TERMINAL GROUP SUMMARY**  
 Willbridge Terminals  
 Portland, Oregon

	8/27/2009	0.00	sheen
	9/14/2009	0.00	sheen
	10/29/2009	sheen	sheen
	8/30/2010	0.02	0.01
	9/20/2010	0.02	sheen
	10/29/2010	sheen	sheen
	11/30/2010	sheen	sheen
	12/14/2010	0.00	sheen
	1/25/2011	sheen	sheen
	2/23/2011	sheen	sheen
	4/27/2011	0.00	sheen
	5/25/2011	sheen	sheen
	6/8/2011	0.00	sheen
	7/28/2011	0.00	sheen
	8/26/2011	0.03	0.01
	9/26/2011	0.01	sheen
	12/12/2011	0.06	sheen
	10/30/2012	0.06	absorbent sock replaced
	11/30/2012	0.01	absorbent sock replaced
	12/17/2012	0.01	0.01
	1/30/2013	0.01	trace
	2/28/2013	sheen	none
	3/25/2013	0.02	0.01
	4/18/2013	0.13	0.02
	5/31/2013	sheen	0.00
	6/17/2013	0.02	0.01
	7/31/2013	0.07	0.01
	8/28/2013	0.03	0.01
	9/9/2013	sheen	absorbent sock replaced
<b>MW-19</b>	10/31/2013	sheen	0.00
	11/27/2013	sheen	0.00
	1/31/2014	sheen	0.00
	2/27/2014	sheen	0.00
	4/30/2014	0.01	0.01
	8/26/2014	0.01	0.01
	<b>1/30/2015</b>	<b>0.03</b>	<b>0.01</b>
	<b>2/26/2015</b>	<b>0.02</b>	<b>0.01</b>
	<b>3/3/2015</b>	<b>0.04</b>	<b>0.01</b>
<b>MW-22</b>	10/30/2007	0.00	sheen
	11/29/2007	0.00	0.00
	12/28/2007	0.00	sheen
	1/22/2008	0.00	sheen
	2/26/2008	0.00	0.00
	3/31/2008	0.00	0.00
	4/17/2008	0.00	0.00
	5/29/2008	0.00	0.00
	6/23/2008	0.00	0.00
	8/26/2008	0.00	0.00
	9/29/2008	0.00	0.00
	3/26/2009	0.00	sheen
<b>MW-23</b>	10/30/2007	0.00	sheen
	11/29/2007	0.00	sheen
	12/28/2007	0.00	sheen
	1/22/2008	0.00	sheen
	2/26/2008	0.00	sheen
	3/31/2008	0.00	0.02
	4/17/2008	0.00	0.00
	5/29/2008	0.00	0.00
	6/23/2008	0.01	sheen
	8/26/2008	0.10	0.00

**TABLE 9**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA - WILLBRIDGE TERMINAL GROUP SUMMARY**  
 Willbridge Terminals  
 Portland, Oregon

	9/29/2008	0.00	0.01
	10/20/2008	0.01	sheen
	11/25/2008	sheen	sheen
	12/30/2008	sheen	sheen
	1/30/2009	0.00	sheen
	2/26/2009	0.00	0.01
	3/26/2009	0.00	0.01
	6/15/2009	0.01	0.01
	7/31/2009	-**	0.02
	8/27/2009	sheen	sheen
	9/14/2009	sheen	sheen
	10/29/2009	sheen	sheen
	11/23/2009	0.00	sheen
	12/21/2009	sheen	sheen
	1/29/2010	sheen	sheen
	2/25/2010	sheen	sheen
	3/16/2010	sheen	sheen
	4/29/2010	0.00	sheen
	5/24/2010	0.01	sheen
	6/21/2010	sheen	sheen
	8/30/2010	sheen	sheen
	9/20/2010	0.01	sheen
	2/23/2011	sheen	sheen
	3/21/2011	sheen	sheen
<b>MW-23</b>	4/27/2011	sheen	sheen
	5/25/2011	sheen	sheen
	6/8/2011	sheen	sheen
	7/28/2011	0.02	sheen
	8/26/2011	0.03	sheen
	9/26/2011	0.03	sheen
	12/12/2011	0.02	sheen
	10/30/2012	sheen	no action
	12/17/2012	sheen	no action
	1/30/2013	sheen	trace
	3/25/2013	0.02	0.01
	4/18/2013	-	0.01
	5/31/2013	0.03	0.01
	6/17/2013	0.02	absorbent sock replaced
	7/31/2013	0.02	0.01
	8/28/2013	0.03	0.01
	9/9/2013	-	0.01
	10/31/2013	sheen	0.00
	11/27/2013	sheen	0.00
	1/31/2014	sheen	0.00
	2/27/2014	0.00	0.00
	<b>3/3/2015</b>	<b>0.02</b>	<b>0.01</b>
<b>MW-24</b>	11/25/2008	-**	0.01
	12/30/2008	-**	0.02
	1/30/2009	-**	0.10
	2/26/2009	-**	0.01
	3/26/2009	-**	0.01
	3/31/2008	-**	0.00
	4/17/2008	0.00	0.03
	5/29/2008	0.14	0.01
	6/23/2008	-**	0.01
	8/26/2008	-**	0.02
	9/29/2008	0.00	0.02
	10/20/2008	-**	0.01
	11/25/2008	-**	0.01
	12/30/2008	-**	sheen

**TABLE 9**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA - WILLBRIDGE TERMINAL GROUP SUMMARY**  
 Willbridge Terminals  
 Portland, Oregon

	1/30/2009	0.02	0.01
	2/26/2009	sheen	0.01
	3/26/2009	-**	0.01
	6/15/2009	0.02	0.04
	4/21/2009	-**	0.02
	5/21/2009	sheen	0.01
	6/15/2009	0.02	0.01
	7/31/2009	-**	0.02
	8/27/2009	0.01	sheen
	9/14/2009	0.01	sheen
	10/29/2009	sheen	sheen
	11/23/2009	0.02	0.01
	12/21/2009	0.01	sheen
	1/29/2010	-**	0.01
	2/25/2010	0.40	0.01
	3/16/2010	sheen	0.01
	4/29/2010	0.01	sheen
	5/24/2010	0.02	sheen
	6/21/2010	0.02	0.01
<b>MW-24</b>	9/20/2010	-**	0.01
	10/29/2010	sheen	sheen
	11/30/2010	sheen	0.01
	12/14/2010	sheen	sheen
	1/25/2011	sheen	sheen
	2/23/2011	sheen	sheen
	3/21/2011	0.01	sheen
	4/27/2011	sheen	sheen
	5/25/2011	0.11	0.01
	6/8/2011	-**	0.01
	7/28/2011	0.01	sheen
	8/26/2011	0.02	sheen
	9/26/2011	-**	0.01
	12/12/2011	0.08	sheen
	10/30/2012	sheen	no action
	11/30/2012	0.01	deploy temporary sock
	12/17/2012	0.03	0.01
	1/30/2013	0.02	trace
	6/17/2013	0.02	0.01
	2/28/2013	sheen	none
	3/25/2013	sheen	deploy temporary sock
	4/18/2013	0.01	0.01
	5/31/2013	0.01	0.01
	6/17/2013	0.02	0.01
	7/31/2013	0.02	0.01
	8/28/2013	0.03	0.01
	9/9/2013	-	0.01
	10/31/2013	sheen	0.00
	11/27/2013	sheen	0.00
	1/31/2014	sheen	0.00
	2/17/2014	sheen	0.00
	8/26/2014	0.01	0.01
	<b>1/30/2015</b>	<b>0.02</b>	<b>0.01</b>
	<b>2/26/2015</b>	<b>0.01</b>	<b>0.01</b>
	<b>3/3/2015</b>	<b>0.03</b>	<b>0.01</b>
<b>MW-28</b>	10/30/2007	0.00	0.00
	11/29/2007	0.00	0.00
	12/28/2007	0.00	0.00
	1/22/2008	0.02	sheen
	2/26/2008	0.00	0.00
	3/31/2008	0.00	0.01

**TABLE 9**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA - WILLBRIDGE TERMINAL GROUP SUMMARY**  
 Willbridge Terminals  
 Portland, Oregon

	4/17/2008	0.00	0.00
	5/29/2008	0.00	0.00
	6/23/2008	0.00	sheen
	8/26/2008	0.01	sheen
	9/29/2008	0.04	0.01
	10/20/2008	0.01	0.01
	11/25/2008	0.03	sheen
	12/30/2008	sheen	0.01
	1/30/2009	0.00	0.01
	2/26/2009	sheen	0.01
	3/26/2009	sheen	0.01
	4/21/2009	0.00	sheen
	5/21/2009	0.00	sheen
	6/15/2009	sheen	sheen
	7/31/2009	sheen	0.01
	8/27/2009	0.01	0.01
	9/14/2009	0.05	sheen
	10/29/2009	0.25	sheen
	11/23/2009	0.01	0.25
	12/21/2009	0.00	sheen
	1/29/2010	sheen	sheen
	2/25/2010	sheen	sheen
	3/16/2010	sheen	sheen
	4/29/2010	sheen	sheen
	5/24/2010	sheen	sheen
	6/21/2010	sheen	sheen
	9/20/2010	sheen	sheen
	10/29/2010	sheen	sheen
	11/30/2010	sheen	sheen
	12/14/2010	sheen	0.01
	2/23/2011	sheen	sheen
	3/21/2011	sheen	sheen
	4/27/2011	sheen	sheen
	5/25/2011	sheen	sheen
	6/8/2011	0.00	sheen
	7/28/2011	sheen	sheen
	8/26/2011	0.00	sheen
	9/26/2011	0.00	sheen
	12/12/2011	0.05	sheen
	11/30/2012	sheen	no action
	12/17/2012	0.02	0.01
	1/30/2013	0.03	trace
	2/28/2013	sheen	none
	3/25/2013	sheen	deploy temporary sock
	4/18/2013	0.01	0.01
MW-28	5/31/2013	sheen	0.00
	9/9/2013	sheen	absorbent sock replaced
	10/31/2013	0.00	0.00
	11/27/2013	0.00	0.00
	1/31/2014	sheen	0.00
	2/27/2014	sheen	0.00
	<b>1/30/2015</b>	<b>0.04</b>	<b>0.01</b>
MW-31	10/30/2007	0.00	0.02
	11/29/2007	0.00	0.02
	12/28/2007	0.00	0.01
	1/22/2008	0.00	sheen
	2/26/2008	0.00	0.01
	3/31/2008	0.00	0.02
	4/17/2008	0.00	0.00
	5/29/2008	0.00	0.00

**TABLE 9**  
**GROUNDWATER ELEVATION AND SPH RECOVERY DATA - WILLBRIDGE TERMINAL GROUP SUMMARY**  
 Willbridge Terminals  
 Portland, Oregon

	6/23/2008	0.00	0.00
	8/26/2008	0.00	0.00
	9/29/2008	0.01	0.00
	10/20/2008	0.01	0.02
	11/25/2008	sheen	0.01
	12/30/2008	sheen	0.01
	1/30/2009	0.00	0.00
	2/26/2009	sheen	0.00
	3/26/2009	0.00	0.00
	9/14/2009	0.00	sheen
	11/23/2009	0.00	sheen
	1/29/2010	sheen	sheen
	2/25/2010	sheen	sheen
	3/16/2010	sheen	0.00
	6/21/2010	0.01	sheen
	9/20/2010	0.00	sheen
	10/30/2012	sheen	no action
<b>MW-35</b>	10/30/2007	0.00	0.00
	11/29/2007	0.00	0.00
	12/28/2007	0.00	sheen
	1/22/2008	0.00	0.00
	2/26/2008	0.00	sheen
	3/31/2008	0.00	0.00
	4/17/2008	0.00	0.00
	5/29/2008	-	-
	6/23/2008	0.00	0.00
	8/26/2008	0.00	0.00
	9/29/2008	0.00	0.00

**Notes:**

Data collected prior to 4Q11 are presented as they were reported by previous consultants  
 able to determine due to SPH viscosity

- = Not measured

**Attachment A**

Field Gauging Sheets

8/19/2015

Task: 3Q15 quarterly gauging

Personnel: H. Olson, E. Schmieg

Weather: forecast 98° sunny

0700 - ARCADIS onsite - check in with station guard (MTD yard)

0715 - sign in, receive permit with CVX station.

0800 - verify permit with B. Flemister

0830 - MOB to beach

0835 - PID reading

<u>Item</u>	<u>cal val</u>	<u>reading</u>
CO	50 ppm	49 ppm
H <sub>2</sub> S	25 ppm	25 ppm
CH <sub>4</sub> LCL	50%	50%
O <sub>2</sub>	20.9%	20.9%
ISO	100 ppm	100 ppm

0921 - MOB to MTD tankyard

VOC: 0.0 ppm

0943 MOB to MTD rear yard

1040 MOB to MTD guard station

VOC: 0.0 ppm

1107 Break for lunch

1140 MOB to Front Ave; Tailgate mtg

VOC: 0.0 ppm

1215 MOB to Lube Alley - CP-a

8/19/15

1232 - MOB to Bldg G

1311 - MOB to Tank yard

1350 - MOB to CR8-sump PD=0.0

1410 - BEGIN GAUGING WELLS ALONG BEACH

1500 - BRIAN FLEMISTER + MEG SIGN ON TO

CVX PERMIT TO FIND 12" MANHOLE

1555 FINISH GAUGING, BEGIN CLEANUP

1610 MEG ARMSTRONG CALLS CHRIS DORTON  
TO CLOSE PWSCLOSE CVX GENERAL PERMIT → GAUGER  
STATION; RETIRE KEY #121620 RETURN BADGES → GUARD STATION,  
AND OFF SITE~~JK~~

Date: 04/09/15  
Field Personnel: BF/ES

Chevron Terminal No. 100-1868  
5531 NW Doane Avenue  
Portland, Oregon  
Depth to Water and SPH Measurements

2Q 2015

Well ID	Diameter (in)	Time	TOC	VOC	DTP	DTW	SPH Thickness	SPH Removed	Total Well Depth	Notes
			(feet)	(ppm)	(feet)	(feet)	(feet)	(mL)	(feet)	
CR-33	2	07:20	16.86	—	—	5.94	—	0	17.88	
CR-32A	2	07:35	21.91			3.39			13.75	SOFT BOTTOM
CR-32B	2	07:30	22.02	—	—	9.00	—	0	46.15	
CR-1	4	07:45	21.69	—	—	3.22	—	—	20.96	
CR-32C	2	07:25	21.76	—	—	9.71	—	0	62.46	
CR-31A	2	07:46	21.58	—	—	3.12	—	—	13.14	SOFT BOTTOM
CR-31B	2	07:45	21.7	—	—	9.08	—	—	45.35	
CR-30A	2	07:55	33.08	—	—	13.85	—	—	22.52	
CR-30B	2	07:58	32.33	—	—	17.13	—	—	52.79	
Old Sump		07:36	—	—	—	3.51	—	—	7.78	
Old Sump North		07:50	—	—	—	3.85	—	—	7.93	
Old Sump South		07:51	—	—	—	5.19	—	—	7.99	
River Stage										
B-19	2	09:00	34.66	—	—	15.91	—	—	30.58	
B-9A	2	08:40	33.58	—	—	15.13	—	—	25.05	
CR-26	2	08:35	33.21	—	—	15.55	—	—	59.55	DTW = 21.23, PRESSURE IN WELL
CR-27C	2	08:37	33.31	—	—	20.51			74.52	
B-7	2	08:25	33.85			15.81	—	—	30.09	
B-20	2	08:27	33.33	15.39	15.40	0.01			NC	
B-21	2	08:20	34.82	—	—	16.21	—	—	33.53	
B-15	2	08:15	35.58	—	—	16.68	—	—	28.75	
EX-1	12	09:05	34.35	—	—	15.43	—	—	27.95	
B-10	2	09:13	34.78	—	—	15.59	—	—	32.36	
B-26	2	09:17	35.33	—	—	16.01	—	—	32.83	
B-11	2	09:20	34.99	—	—	15.45	—	—	33.71	
CR-3	4	09:40	34.31			14.64			22.00	
CR-29A	2	09:35	34.19	—	—	14.65	—	—	21.52	
B-12	2	10:05	35.44	—	—	15.84	—	—	32.98	
CR-29B	2	09:37	34.32	—	—	15.97	—	—	50.35	
CR-28A	2	09:55	34.9	—	—	15.84	—	—	23.01	
CR-28B	2	10:00	34.87	—	—	14.79			49.78	
CR-28C	2	09:58	34.75	—	—	13.78	—	—	78.85	
CR-34-1		10:15	35.24	—	—	16.24	—	—	20.37	
CR-34-2		10:17	35.26	—	—	16.27	—	—	26.09	
CR-35-1		10:13	35.8	—	—	16.76	—	—	19.90	
CR-35-2		10:10	35.88	—	—	16.82	—	—	24.95	
B-14	2	10:17	33.62	—	—	17.61	—	—	38.02	

00:45 H<sub>2</sub>S 25 25  
CO 50 49  
LEL 50 49  
O<sub>2</sub> 20.9 20.9  
ISO 100 100  
No seeps observed @ BEACH  
1 CPT

BLACK LINES Delimiting  
REORDER WELLS ON SHEET

Date: 06/09/15  
Field Personnel: BF / EG

Chevron Terminal No. 100-1868  
5531 NW Doane Avenue  
Portland, Oregon  
Depth to Water and SPH Measurements

202015

Well ID	Diameter (in)	Time	TOC	VOC	DTP	DTW	SPH Thickness	SPH Removed	Total Well Depth	Notes
			(feet)	(ppm)	(feet)	(feet)	(feet)	(mL)	(feet)	
B-28	2	13:25	35.28	-	-	15.95	-	-	30.53	
B-29	2	13:20	36	-	-	15.58	-	-	29.39	
B-30	2	13:10	35.39	-	-	15.44	-	-	28.69	
B-24	2	13:30	34.7	-	-	15.92	-	-	32.08	
CR-24A	0.75	13:35	36.21	-	-	13.60	-	-	19.75	
CR-24B	2	13:37	36.32	-	-	12.59	-	-	40.43	
CR-6	4	13:45	35.61	-	-	12.20	-	-	23.12	
CR-23A	0.75	14:00	36.35	-	12.42	12.42	0.39	-	-	DTW: 12.81
CR-23B	2	14:05	36.27	-	-	11.70	-	-	40.55	TD 40.45
CR-7	4	14:08	35.57	-	-	10.75	-	-	22.75	
CR-22A	0.75	14:15	34.8	-	-	11.42	-	-	17.32	
CR-22B	2	14:10	35.19	-	-	10.26	-	-	41.72	
GPW-1	0.75		34.66			12.30	-	-	19.21	
GPW-2	0.75	14:25	34.98	-	10.31	10.25 BP	-	-	-	DTW: 10.31
GPW-3	0.75	14:23	35.08	-	-	11.18	-	-	16.00	
GPW-4	0.75	14:20	34.07	-	11.91	11.99	0.08	-	-	
GPW-5	0.75	14:17	34.85	-	-	11.81	-	-	19.20	
CR-9	4	11:15	35.72	-	-	5.38	-	-	23.96	
CR-8	4	11:07	33.14	-	-	6.35	-	-	24.40	
Sump	18	11:05	-	-	-	5.76	-	-	8.98	SOFT BOTTOM
CR-25	2	10:57	34.27	-	-	7.80	-	-	8.89	
12" Manhole		10:47	-	-	5.63	5.63	0.01	-	-	SCREEN
CR-21A	0.75	11:27	34.11	-	5.32	5.35	0.03	-	-	
CR-21B	2	11:25	34.36	-	-	5.43	0	-	41.25	
CR-11	4	10:45	34.43	-	-	-	-	-	-	IN ACCESSABLE - PALLET
CR-4A	4	12:15	37.14	-	-	4.05	-	-	7.49	
CR-10	4	11:35	35.57	-	6.09	6.12	0.03	-	-	
CR-19	2	11:40	35.49	-	6.22	6.78	0.56	-	-	
CR-12	2	11:45	35.59	-	-	6.05	-	-	15.05	
CR-15	2	11:50	35.42	-	10.10	10.21	0.11	-	-	
CR-20	2	11:55	35.14	-	-	8.36	-	-	14.85	
CR-14	2	11:57	35.43	-	-	6.28	-	-	14.58	14.98 (DTB)
CR-17	2	12:03	34.46	-	-	7.73	-	-	13.90	
CR-16	2	12:05	34.77	-	-	11.55	-	-	15.39	

\* TALK TO LUBES ABT. MOVING PALLET @ CE-11

Chevron Willbridge Terminal No. 1001868

Date: 06/01/15  
Logged by: HBM

5924 NW Doane Ave.  
Portland, Oregon

## 2Q Product Removal

## Notes

mL/10th of foot	1" = 15	2" = 61	3.5" = 189
	1.25" = 23	2.5" = 98	4" = 246
	1.5" = 34	3" = 140	6" = 556 12" = 1112

## Additional Notes

Product not removed from CR-23A due to malfunctioning peripump

**Willbridge Facility**  
 Field Sampling Record  
 Qtr/yr: 2015

Technician: BNL

DATE: 6/29/16

Well	Depth to Product	SPH Thickness	Depth to Water	Total Depth (3/16/10)	Total Fluids Extracted	Est. Product Recovered	Notes
	(feet)	(feet)	(feet)	(feet)	(gallons)	(gallons)	
<b>Kinder Morgan</b>							
MW-1				15.55			
MW-2				16.1			
MW-3				16.1			
MW-4				16.4			
MW-5				16.1			
MW-6	-	-	3.40	14.9	-	-	
MW-7	-	-	7.75	15.7	-	-	
MW-8				15.0			
MW-9				17.9			
MW-10				17.3			
MW-11				16.35			
MW-12				15.2			
MW-13				16.1			
MW-14				15.25			
MW-15				14.6			
MW-16				14.5			
MW-17				13.9			
MW-18				13.3			
MW-19	3.35	0.05	4.00	14.7	0.01	0.01	Sorbed
MW-20				20.1			
MW-22				16.3			
MW-23	4.50	?	?	15.3	0.01	0.01	Sorbed, Too Viscous to determine DTW
MW-24	5.10	?	?	15.5	0.01	0.01	Sorbed, Too Viscous to determine DTW
MW-25				15.6			
MW-26				16.4			
MW-27				15.4			
MW-28	-	-	6.03	15.0	-	-	
MW-29				19.9			

**Willbridge Facility**  
 Field Sampling Record  
 Qtr/yr: 2015

Technician: BML

DATE: 4-29-15

Well	Depth to Product	SPH Thickness	Depth to Water	Total Depth (3/16/10)	Total Fluids Extracted	Est. Product Recovered	Notes
	(feet)	(feet)	(feet)	(feet)	(gallons)	(gallons)	
<b>Kinder Morgan</b>							
MW-30				14.75			
MW-31	-	-	6.53	15.9	-	-	
MW-32				14.9			
MW-33				26.1			
MW-34				24.95			
MW-35				12.9			
MW-36				28.4			
MW-37				28.5			
MW-38				14.5			
MW-39				NM			
MW-40				19.0			
MW-41B				NM			
MW-41C				NM			
MW-42B				NM			
MW-42C				NM			

Willbridge Facility  
Field Sampling Record  
Qtr/yr: \_\_\_\_\_

Technician: BVL

DATE: 5/28/15

Well	Depth to Product	SPH Thickness	Depth to Water	Total Depth (3/16/10)	Total Fluids Extracted	Est. Product Recovered	Notes
	(feet)	(feet)	(feet)	(feet)	(gallons)	(gallons)	
<b>Kinder Morgan</b>							
MW-1				15.55			
MW-2				16.1			
MW-3				16.1			
MW-4				16.4			
MW-5				16.1			
MW-6	4.40	0.01	4.41	14.9	0.01	0.01	Sorbel
MW-7	3.40	0.02	3.42	15.7	0.01	0.01	Sorbel
MW-8				15.0			
MW-9				17.9			
MW-10				17.3			
MW-11				16.35			
MW-12				15.2			
MW-13				16.1			
MW-14				15.25			
MW-15				14.6			
MW-16				14.5			
MW-17				13.9			
MW-18				13.3			
MW-19	4.25	0.11	4.36	14.7	0.01	0.01	Sorbel
MW-20				20.1			
MW-22				16.3			
MW-23	5.80	0.03	5.03	15.3	0.01	0.01	Sorbel
MW-24	5.62	0.01	5.63	15.5	0.01	0.01	Sorbel
MW-25				15.6			
MW-26				16.4			
MW-27				15.4			
MW-28	-	-	6.83	15.0			
MW-29				19.9			

**Willbridge Facility**  
 Field Sampling Record  
 Qtr/yr: \_\_\_\_\_

Technician: BWL  
 DATE: 5/28/15

Well	Depth to Product	SPH Thickness	Depth to Water	Total Depth (3/16/10)	Total Fluids Extracted	Est. Product Recovered	Notes
	(feet)	(feet)	(feet)	(feet)	(gallons)	(gallons)	
<b>Kinder Morgan</b>							
MW-30				14.75			
MW-31	~	~	7.38	15.9			
MW-32				14.9			
MW-33				26.1			
MW-34				24.95			
MW-35				12.9			
MW-36				28.4			
MW-37				28.5			
MW-38				14.5			
MW-39				NM			
MW-40				19.0			
MW-41B				NM			
MW-41C				NM			
MW-42B				NM			
MW-42C				NM			

**Willbridge Facility**  
 Field Sampling Record  
 Qtr/yr: \_\_\_\_\_

Technician: BNC

DATE: 6/2/15

Well	Depth to Product	SPH Thickness	Depth to Water	Total Depth (3/16/10)	Total Fluids Extracted	Est. Product Recovered	Notes
	(feet)	(feet)	(feet)	(feet)	(gallons)	(gallons)	
<b>Kinder Morgan</b>							
MW-1	-	-	4.93	15.55			
MW-2	-	-	6.69	16.1			
MW-3	-	-		16.1			
MW-4	-	-	7.60	16.4			
MW-5	-	-	6.38	16.1			
MW-6	6.71	0.02	6.73	14.9	0.01	0.01	sorbed
MW-7	-	-	8.65	15.7	-	-	Product on Probe
MW-8	-	-	7.90	15.0			
MW-9	-	-	9.16	17.9			
MW-10	-	-	9.55	17.3			
MW-11	-	-	6.36	16.35			
MW-12	-	-	6.87	15.2			
MW-13	-	-	5.70	16.1			
MW-14	-	-	4.88	15.25			
MW-15	-	-	6.31	14.6			
MW-16	-	-	5.24	14.5			
MW-17	-	-	4.78	13.9			
MW-18	-	-	2.50	13.3			
MW-19	4.40	0.02	4.42	14.7	0.01	0.01	sorbed
MW-20	-	-	10.20	20.1			
MW-22	-	-	4.80	16.3	-	-	Product on Probe
MW-23	5.10	0.01	5.11	15.3	0.01	0.01	sorbed
MW-24	5.72	?	?	15.5	0.01	0.01	Sorbed, Too Viscous for DTW
MW-25	-	-	11.13	15.6			
MW-26	-	-	11.36	16.4			
MW-27	-	-	5.16	15.4			
MW-28	-	-	6.96	15.0	-	-	Product on Probe
MW-29	-	-	13.78	19.9			

**Willbridge Facility**  
 Field Sampling Record  
 Qtr/yr: \_\_\_\_\_

Technician: BMC  
 DATE: 6/9/15

Well	Depth to Product	SPH Thickness	Depth to Water	Total Depth (3/16/10)	Total Fluids Extracted	Est. Product Recovered	Notes
	(feet)	(feet)	(feet)	(feet)	(gallons)	(gallons)	
<b>Kinder Morgan</b>							
MW-30	~	~	5.89	14.75			
MW-31	—	—	7.61	15.9			
MW-32	—	—	5.70	14.9			
MW-33	—	—	19.90	26.1			
MW-34	—	—	19.56	24.95			
MW-35	—	—	2.60	12.9			
MW-36	—	—	14.51	28.4			
MW-37	—	—	15.00	28.5			
MW-38	—	—	6.21	14.5			
MW-39	—	—	10.89	NM			Needs new tail
MW-40	—	—	14.21	19.0			
MW-41B	—	—	16.45	NM			
MW-41C	—	—	16.04	NM			
MW-42B	—	—	24.21	NM			
MW-42C	—	—	25.15	NM			

**Willbridge Facility**  
 Field Sampling Record  
 Qtr/yr: \_\_\_\_\_

Technician: Bac  
 DATE: 7/31/15

Well	Depth to Product	SPH Thickness	Depth to Water	Total Depth (3/16/10)	Total Fluids Extracted	Est. Product Recovered	Notes
	(feet)	(feet)	(feet)	(feet)	(gallons)	(gallons)	
<b>Kinder Morgan</b>							
MW-1				15.55			
MW-2				16.1			
MW-3				16.1			
MW-4				16.4			
MW-5				16.1			
MW-6	5.76	0.01	5.77	14.9	0.01	0.01	Sorbed
MW-7	9.45	0.02	9.27	15.7	0.01	0.01	Sorbed
MW-8				15.0			
MW-9				17.9			
MW-10				17.3			
MW-11				16.35			
MW-12				15.2			
MW-13				16.1			
MW-14				15.25			
MW-15				14.6			
MW-16				14.5			
MW-17				13.9			
MW-18				13.3			
MW-19	5.45	0.05	5.50	14.7	0.01	0.01	Sorbed
MW-20				20.1			
MW-22				16.3			
MW-23	5.21	0.01	5.22	15.3	0.01	0.01	Sorbed
MW-24	7.10	??	???	15.5	0.01	0.01	Sorbed
MW-25				15.6			
MW-26				16.4			
MW-27				15.4			
MW-28	—	—	7.11	15.0	—	—	
MW-29				19.9			

**Willbridge Facility**  
 Field Sampling Record  
 Qtr/yr: \_\_\_\_\_

Technician: BVL  
 DATE: 7/31/15

Well	Depth to Product	SPH Thickness	Depth to Water	Total Depth (3/16/10)	Total Fluids Extracted	Est. Product Recovered	Notes
	(feet)	(feet)	(feet)	(feet)	(gallons)	(gallons)	
<b>Kinder Morgan</b>							
MW-30				14.75			
MW-31	—	—	8.61	15.9	—	—	
MW-32				14.9			
MW-33				26.1			
MW-34				24.95			
MW-35				12.9			
MW-36				28.4			
MW-37				28.5			
MW-38				14.5			
MW-39				NM			
MW-40				19.0			
MW-41B				NM			
MW-41C				NM			
MW-42B				NM			
MW-42C				NM			

**Willbridge Facility**  
 Field Sampling Record  
 Qtr/yr: \_\_\_\_\_

Technician: BUE/MWit

DATE: 9/19/15

Well	Depth to Product	SPH Thickness	Depth to Water	Total Depth (3/16/10)	Total Fluids Extracted	Est. Product Recovered	Notes
	(feet)	(feet)	(feet)	(feet)	(gallons)	(gallons)	
<b>Kinder Morgan</b>							
MW-1	—	—	6.31	15.55			—
MW-2	—	—	8.24	16.1			
MW-3	—	—	—	16.1			Destroyed
MW-4	—	—	8.97	16.4			
MW-5	—	—	8.19	16.1	—	—	Odor → confirm w/ Butler
MW-6	6.09	.02	6.11	14.9			Diesel/Thin/ Light Color
MW-7	9.63	0.07	9.64	15.7			Sock Saturated
MW-8	—	—	9.19	15.0	—	—	—
MW-9	—	—	10.77	17.9			
MW-10	—	—	10.14	17.3			
MW-11	—	Sheen	8.18	16.35			Gasoline Sheen + Odor
MW-12	—	—	8.52	15.2			—
MW-13	—	—	7.23	16.1			—
MW-14	—	—	6.46	15.25			—
MW-15	—	—	8.62	14.6			
MW-16	—	—	6.77	14.5			
MW-17	—	—	5.72	13.9			
MW-18	—	—	3.43	13.3			Scum; N. Sheen; Bio-Growth
MW-19	5.77	0.08	5.85	14.7			Sock Saturated; Thin Brown SPH
MW-20	—	—	11.37	20.1			—
MW-21	5.76	0.01	5.77	16.3			Strong Odor; Thin Brown
MW-23	5.91	0.01	5.92	15.3			Sock; Pale Black oil
MW-24	7.61	0.01	7.62	15.5			Tick Black oil
MW-25	—	—	12.18	15.6			
MW-26	—	—	12.46	16.4			
MW-27	—	—	8.42	15.4			
MW-28	—	Sheen	7.45	15.0			odor
MW-29	—	—	14.71	19.9			

**Willbridge Facility**  
 Field Sampling Record  
 Qtr/yr: \_\_\_\_\_

Technician: BVL/mwt

DATE: 8/19/15

Well	Depth to Product (feet)	SPH Thickness (feet)	Depth to Water (feet)	Total Depth (3/16/10) (feet)	Total Fluids Extracted (gallons)	Est. Product Recovered (gallons)	Notes	
Kinder Morgan							No Thickness in Well	
MW-30	—	Sheen	7.17	14.75			Thick Tar ball stuck on probe	
MW-31	—	—	8.94	15.9				
MW-32	—	—	6.91	14.9				
MW-33	—	—	20.54	26.1				
MW-34	—	—	19.77	24.95				
MW-35	—	—	4.68	12.9			—	
MW-36	—	—	15.08	28.4				
MW-37	—	—	15.77	28.5			—	
MW-38	—	—	7.67	14.5				
MW-39	—	—	NM				Under Roofing; GS Can't Able Today	
MW-40	—	—	14.81	19.0				
MW-41B	—	—	17.40	NM				
MW-41C	—	—	16.97	NM				
MW-42B	—	—	25.07	NM			—	
MW-42C	—	✓	26.04	NM			—	

Willbridge Facility  
Field Sampling Record  
Qtr/yr: 3Q 2015

Technician: NWH/MKT

DATE: 9/29/15

Well	Depth to Product	SPH Thickness	Depth to Water	Total Depth (3/16/10)	Total Fluids Extracted	Est. Product Recovered	Notes
	(feet)	(feet)	(feet)	(feet)	(gallons)	(gallons)	
<b>Kinder Morgan</b>							
MW-6	6.67	0.04	6.71	14.9	n/a	n/a	light brown product
MW-7	10.08	0.06	10.14	15.7			light brown product
MW-22	6.71	0.1	6.72	14.7			Strong Vegetable Odor
MW-19	6.32	0.06	6.38	16.3			medium viscosity, black product
MW-23	5.94	0.03	5.97	15.3			thick, black product
MW-24	8.13	0.02	8.15	15.5			thick, black product
MW-28	—	—	11.51	15.0			sheen
MW-31	—	—	9.47	15.9	↓	↓	sheen

08/19/15 CVX 3824972 3Q2015 GWM 1/1

PURPOSE: GWM

PERSONNEL: BRIAN FLEMISSE, MEG ARMSTRONG  
WXISUNNY 90°

0730 ANA ONSITE, H3S MEETING

08:15 RECEIVE ID @ OPERATIONS

08:30 MOB TO AIRPLAT SHED

08:45 BEGIN GAMING WELLS

10:00 MOB TO GRAVEL LOT

11:00 MOB TO FRONT AVE

12:00 MOB TO DOANE

13:00 MOB TO ALLEY 3 TANK YARD

14:00 CONTINUE TO TANK FIELD 2

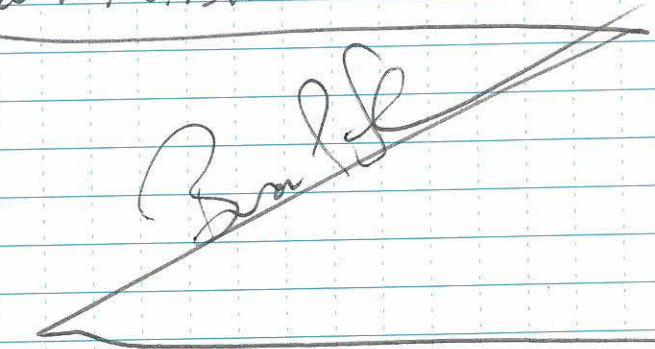
15:10 MOB TO MAINTENANCE SIGN OUT PLE6

15:20 SIGN IN @ 10018608 CHEVRON GAUGE

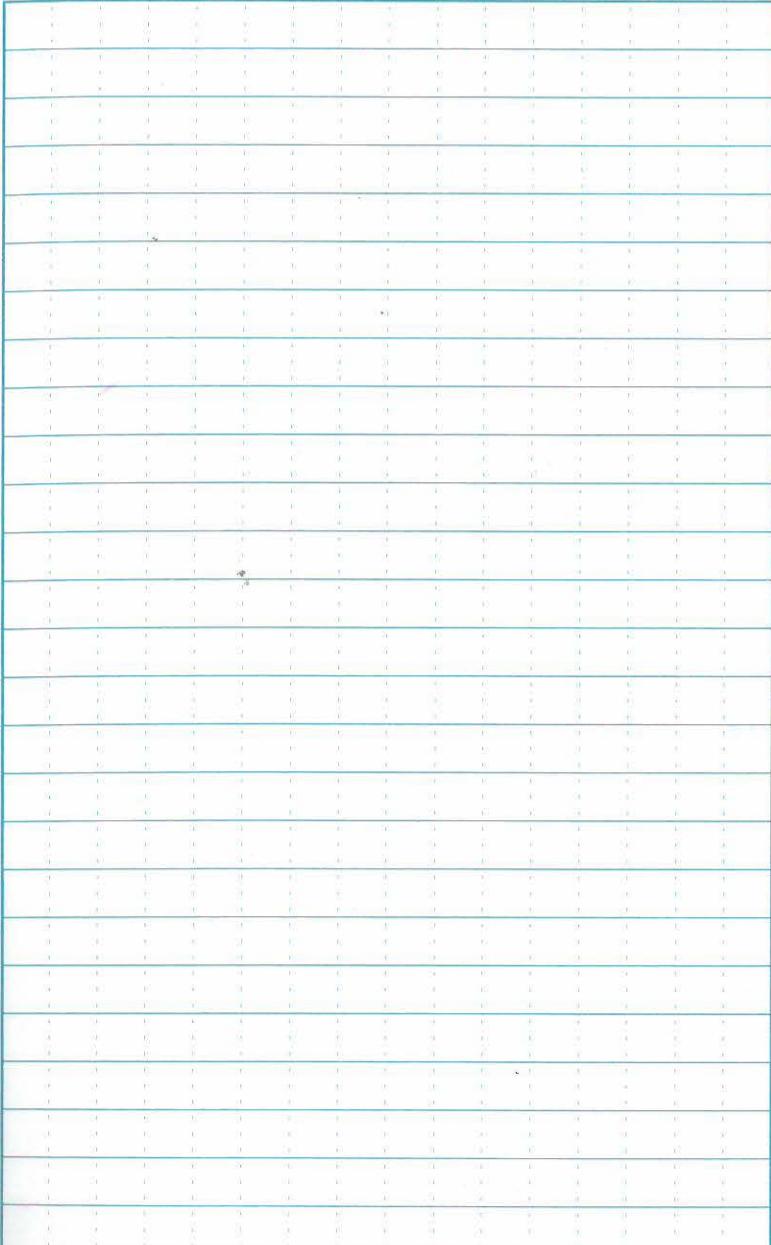
CR-11, ~~REF~~ 12" MANHOLE IN LUBES ALLEY

16:10 CLOSE PTW w/ CHRIS DOTSON

16:20 ANA OFFSITE.



Scale: 1 square =  $2\sqrt{BCa^2} + \sqrt{BS}$



Scale: 1 square = \_\_\_\_\_

Rate in the Rain

Date: 6/9/15

Field Personnel: Hridaya Bastola  
Meg ArmstrongPhillips Terminal No. 354972  
5528 NW Doane Avenue  
Portland, Oregon

Depth to Water and SPH Measurements

Well ID	Diameter	Time	TOC	DTP	DTW	SPH Thickness	SPH Removed	Total Depth	VOC	Notes
U-28		0905	20.06	—	9.52	0.0	—	27.83	0.0	
P1-A		0906	18.48	—	8.66	0.0	—	22.34	0.0	
U-26		0912	19.51	—	8.18	6.0	—	19.95	0.0	
U-27		0915	26.44	—	11.18	0.0	—	22.52	0.0	
U-22A		0917	17.30	—	9.11	0.0	—	22.87	0.0	
U-22B		0920	16.91	—	7.72	0.0	—	32.39	0.2	
U-23		0924	19.30	—	5.76	0.0	—	19.20	0.1	
U-24A		0926	19.94	—	9.32	0.0	—	23.22	0.0	
U-24B		0930	20.09	—	8.49	0.0	—	33.79	0.0	
U-25		0932	20.99	—	6.05	0.0	—	20.16	0.0	
U-29A		10:02	33.40	—	16.92	0.0	—	19.55	0.0	
U-29B		09:50	32.85	—	18.97	0.0	—	49.71	0.0	
U-29C		09:47	32.73	—	22.85	0.0	—	82.72	0.0	
GP-6		10:05		—	17.43	0.0	—	23.77	0.0	
B-40		10:12	33.68	—	17.15	0.0	—	28.60	0.0	11/16" bolts
GP-1		10:15		—	17.58	0.0	—	24.34	0.0	11/16" bolts
GP-3		10:25		—	17.32	0.0	—	22.67	0.0	
B-22A		10:30	34.85	—	17.84	0.0	—	29.43	0.0	
IT-E		10:35	36.07	—	19.10	0.0	—	—	0.0	
B-41A		10:47	35.08	—	18.00	0.0	—	27.23	0.0	
DW-1		10:50	35.90	—	19.71	0.0	—	29.05	0.0	
IF-1		10:53		—	19.74	0.0	—	25.52	0.0	
RES-N		10:58	38.00	—	19.62	0.0	—	—	0.0	
OF-1		11:05		—	22.93	<del>0.0</del> <del>ma</del>	—	19.68	0.0	
B-38		11:06	36.07	—	20.04	0.0	—	21.60	0.0	
DW-2		11:08	36.04	—	19.60	0.0	—	33.44	0.0	
IF-2		11:16		—	19.59	0.0	—	24.55	0.0	
OF-2		11:19		—	19.62	0.0	—	22.51	0.0	
B-37		11:20	35.79	—	19.61	0.0	—	30.62	0.0	
U-5		11:22	34.10	—	16.70	0.0	—	20.74	0.0	11/16" bolts

Date: 06/09/15

Field Personnel: HIRDAYA BASTOLA  
MEG ARMSTRONGPhillips Terminal No. 354972  
5528 NW Doane Avenue  
Portland, Oregon  
Depth to Water and SPH Measurements

Well ID	Diameter	Time	TOC	DTP	DTW	SPH Thickness	SPH Removed	Total Depth	VOC	Notes
B-36	11 20	31.00	—	14.36	0.0	—	—	27.48	0.0	
B-3	11 40	34.80	—	18.16	0.0	—	—	32.41	0.0	
B-1	12 15	34.65	—	16.92	0.0	—	—	28.50	0.0	
IT-W	12 25	35.91	—	17.60	0.0	—	—	—	0.0	
B-35	12 18	33.54	—	16.94	0.0	—	—	29.14	0.0	
B-2	12 29	35.54	—	16.97	0.0	—	—	33.48	0.0	
B-6	12 31	35.46	—	16.69	0.0	—	—	33.02	0.0	
B-4	13 35	34.69	—	17.65	0.0	—	—	33.19	0.1	
B-5	13 40	34.83	—	16.32	0.0	—	—	28.65	0.0	11/16" bolts
B-17	13 45	35.93	—	16.96	0.0	—	—	29.80	0.0	11/16" bolts
B-16	13 50	35.61	—	17.16	0.0	—	—	31.85	0.0	11/16" bolts
U-14	14 08	35.74	—	13.72	0.0	—	—	19.38	0.1	
U-4	15:35	34.46	—	15.43	0.0	—	—	26.34	0.0	GAUGED BY BF/ES
RES-O	15:30	36.03	—	15.05	0.0	—	—	37.70	—	GAUGED BY BF/ES
U-20	15:25	35.39	—	14.42	0.0	—	—	23.40	—	GAUGED BY BF/ES
U-21	15:20	35.74	—	14.58	0.0	—	—	20.08	—	GAUGED BY BF/ES
B-27	15:45	37.21	17.39	17.39	0.0	—	—	—	—	SHEEN - GAUGED BY ES/BF
U-16	14:15	36.08	—	12.74	0.0	—	—	17.86	88.2	
U-13	14:18	35.77	—	13.52	0.0	—	—	19.73	0.3	
U-15	14:20	35.57	—	13.26	0.0	—	—	20.02	50.8	
U-3	14:25	35.25	—	12.93	0.0	—	—	21.78	0.1	
U-2	14:30	35.02	—	14.95	0.0	—	—	19.72	0.1	Something down well
U-17	14:32	35.77	—	13.34	0.0	—	—	19.47	100	
U-18	14:40	34.83	—	8.71	0.0	—	—	14.83	0.0	
U-5A	14:45	33.77	6.98	7.19	0.0	—	—	—	—	
U-19	15:10	34.22	—	14.54	0.0	—	—	15.83	—	GAUGED BY BF/ES

ConocPhillips Terminal No. 354972  
5528 NW Doane Ave.  
Portland, Oregon

## QUARTER 2<sup>nd</sup>

DATE 6/10/15 PERSONNEL Meg Armstrong

Hridanya Bastola

## **Conoco Phillips Monthly Gauging and Product Removal**

## Notes-

Well	SPH thickness during gauging	Estimated volume
U-5A	Undetermined - viscous product	Unknown
	0.21	

mL/10th of foot	1" = 15	2" = 61	3.5" = 189
	1.25" = 23	2.5" = 98	4" = 246
	1.5" = 34	3" = 140	6" = 556

**Attachment B**

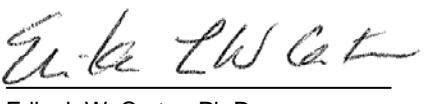
Standard Operating Procedures

## **Groundwater Sampling with HydraSleeves™ – Standard Operating Procedure**

Rev. #: 2

Rev Date: February 2011

**Approval Signatures**

Prepared by:   
Erika L.W. Carter, Ph.D.

Date: 2/2/11

Reviewed by:   
Craig Divine, Ph.D., P.G. (Technical Expert)

Date: 2/2/11

## I. Scope and Application

This Standard Operating Procedure (SOP) establishes guidelines and procedures for use by field personnel in the deployment of HydraSleeves™ and subsequent collection and documentation of groundwater samples for chemical analysis. Proper collection procedures are necessary to assure the quality and integrity of all groundwater samples. The details within this SOP should be used in conjunction with site-specific work plans.

The HydraSleeve™ groundwater sampler can be used to collect a representative sample for most physical and chemical parameters without purging the well. It collects a groundwater sample from a user-defined interval (typically within the well screen), without mixing fluid from other intervals. The HydraSleeve™ is placed within the screened interval of the monitoring well, and a period of time is allocated for the well to re-equilibrate following HydraSleeve™ down-hole deployment. The sealed HydraSleeve™ can be activated and removed for sample collection within several hours to several months. When activated, the HydraSleeve™ collects a sample with no drawdown and minimal agitation or displacement of the water column. Once the sampler is full, the one-way reed valve collapses, preventing mixing of extraneous, non-representative fluid during HydraSleeve™ recovery from the well.

Use of this SOP will provide samples for Level III and Level IV analytical data for use in risk assessments, site characterizations, evaluation of remediation alternatives, engineering design of remediation activities, and in support during remediation activities.

## II. Personnel Qualifications

All personnel shall meet the requirements of the site-specific Health and Safety Plan (HASP).

The Project Manager is responsible for ensuring that all sample collection activities are conducted in accordance with this SOP and any other appropriate procedures. This will be accomplished through staff training and by maintaining quality assurance/quality control (QA/QC).

The Field Manager is responsible for periodic observation of field activities and review of field generated documentation associated with this SOP. The Field Manager is also responsible for implementation of corrective action (e.g., retraining personnel, additional review of work plans and SOPs, variances to QC sampling requirements, issuing non-conformances, etc.) if problems occur.

Field personnel assigned to collect groundwater samples are responsible for completing their tasks according to specifications outlined in this SOP and other appropriate procedures. Field staff shall have prior experience in groundwater sampling. The determination of placement of the HydraSleeve™ in the monitoring well shall be made by a qualified geoscientist. All staff are responsible for reporting deviations from procedures in the Field Activity Daily Log, and to the Field Manager or Project Manager.

### III. Equipment List

There are three main steps for collecting groundwater samples with HydraSleeves™: 1) assembly and deployment of the HydraSleeve™, 2) collecting the groundwater samples after the equilibration period, 3) and pouring the groundwater samples into containers. The equipment needed for each step is listed below.

Equipment needed for assembly and deployment of the HydraSleeves™:

- Appropriate personal protective equipment (PPE)
- Well location maps and table identifying HydraSleeve™ deployment locations/depths
- Well keys
- Flame ionization detector (FID) (as appropriate)
- Photoionization detector (PID) (as appropriate)
- Electronic water-level indicator, 0.01 ft accuracy
- Oil/water interface probe (as appropriate)
- Plastic sheeting to protect all down-hole sampling equipment from contact with potential sources of contamination.
- Decontamination equipment
- Appropriate size HydraSleeves™ for the wells being sampled. Some examples are provided below. Check the manufacturer's website for additional options:
  - 2-L 2" HydraSleeve™ SuperSleeve (SS) (1.9" OD, 60" long; volume of 2 liters; requires special 2-piece top weight) for 2" Schedule 40 wells

- 1-L 2" HydraSleeve™ (1.75" OD, 36" long; volume of 1 liter) for 2" wells
- 1.5" HydraSleeve™ (1.5" OD, 30" long; volume of 625 mL) for 1.5" wells
- 1" HydraSleeve™ (1" OD, 48" long; volume of 325 mL) for wells less than 1.5"
- 1/8-inch diameter braided polypropylene rope (for tethers)
- Weights (stainless steel or other inert material) to anchor HydraSleeves™ in wells (note special weights are required for SuperSleeve-style HydraSleeves™)
- Cable ties to anchor HydraSleeves™ to tether
- Measuring tape
- Cutting implement, such as scissor or knife
- Approved site-specific workplan, Field Sampling Plan (FSP), and HASP

Equipment needed for collection/dispensing of groundwater samples:

- Appropriate PPE
- Planned Sample Table (PST), sample labels, and Chain of Custody forms (COC)
- Sample bottles, coolers, ice
- Blank collection field forms
- Well keys, site maps, and sample list
- Electronic water-level indicator, 0.01 ft accuracy
- Oil/Water interface probe (as appropriate)
- Decontamination equipment

- Plastic sheeting to protect all down-hole sampling equipment from contact with potential sources of contamination.
- Bucket or other container to hold extra groundwater
- Additional HydraSleeves™ and zip ties to deploy for the next sampling event, as appropriate
- Approved site-specific workplan, FSP, and HASP

Unless otherwise specified in the site-specific workplan, it is advisable to establish a sampling order starting with the least contaminated well and progressing to the most contaminated last.

#### IV. Cautions

Selection of the appropriate size HydraSleeve™ depends on sample volume requirements, well diameter, and the length of the saturated screened interval (which dictates the maximum distance allowed over which to pull and fill the HydraSleeve™). The largest HydraSleeve™ (60-inch) holds 2 liters of sample; the smallest holds 325 mL of sample. The sample volume requirements must be verified with the laboratory before deploying the HydraSleeve™ samplers. The HydraSleeve™ sampler is designed for single use (deployment and sample collection) only; tethers and weights should be reused after proper decontamination.

According to the manufacturer, HydraSleeve™ has been used successfully with no equilibration period at some sites for some analytical parameters. HydraSleeve™ does not require dissolved compounds to diffuse across a membrane as in the case of polyethylene diffusion bag (PDB) samplers (ITRC, 2004). Because the HydraSleeve™ mechanically obtains a “core” of the water column, rather than relying on diffusion through a membrane, the HydraSleeve™ sampler can be retrieved shortly after deployment in many cases. One way to conservatively estimate the maximum required equilibration period is to estimate the flush-out period for the well based on the Darcy velocity within the formation (hydraulic conductivity times gradient) (Attachment B). It should be noted, however, that representative groundwater sampling may occur with a shorter flushing period, or no flushing period, if the well contains minimal accumulated silt and care is taken to minimize well disturbance during HydraSleeve™ deployment. Site-specific testing versus another accepted groundwater sampling method can be performed at a subset of wells – preferably spanning a range of hydraulic conductivity, geologic materials, and chemical concentrations – to verify that the HydraSleeve™ device produces samples similar to those obtained from the other accepted method.

## V. Health and Safety Considerations

The HASP will be followed at all times. Appropriate personal protective equipment (PPE) will be worn at all times. Other safety considerations include exposure to contaminated groundwater or non aqueous phase liquid (NAPL) and using sharp cutting tools (scissors, knife).

## VI. Procedure

Field personnel will perform deployment of the HydraSleeves™ in accordance with the following procedures.

### Preliminary Site Activities

1. Visually inspect the well to ensure that it is undamaged, properly labeled and secured. Damage or other conditions that may affect the integrity of the well will be recorded on the Field Activity Daily Log and brought to the attention of the Field Manager or Project Manager.
2. Equipment will either be new or decontaminated in accordance with SOPs prior to use.
3. Lay out plastic sheeting and set up monitoring and sampling equipment.
4. Don appropriate PPE.
5. If specified in the site-specific workplan, measure volatile organic compounds (VOCs) at the rim of the unopened well with a PID and FID and record the reading in the field logbook.
6. Observe if any air is flowing into or out of the casing (e.g., bubbles, hissing sounds). In the event such conditions are observed, they should be noted on the HydraSleeve™ Field Form (Attachment A).
7. Remove well cap.
8. If specified in the site-specific workplan, measure VOCs at the rim of the well with a PID and FID instrument record the reading in the field logbook.
9. If the well casing does not have a reference point (usually a V-cut or indelible mark in the well casing), make one. Record all measurements from this mark.

10. If specified in the site-specific workplan, determine if non-aqueous phase liquid (NAPL) is present in the well using an oil/water interface probe in accordance with SOPs. If NAPL is present, record the depth to NAPL and static water level on the HydraSleeve™ Field Form. A HydraSleeve™ will not be deployed nor will samples be collected from wells where NAPL is present. If NAPL is not present, measure the static water level followed by the total depth of the well with an electronic interface probe, and record the measurements on the HydraSleeve™ Field Form.
11. Measure and record the depth to water and the total depth of the groundwater monitoring well (to 0.01 ft) in all wells to be sampled. Care should be taken to minimize disturbance to the water column and to any particulates attached to the sides or at the bottom of the well.
12. Determine the total depth of the well. Compare the measurement of the total depth of the well with the previous measurement and check against the well construction logs to determine the percent of screen occluded by sediment (if any). If more than 20 percent of a well screen is occluded by sediment, the well will not be sampled until it is re-developed.

#### **Assembly and Deployment of Standard HydraSleeves™**

1. Begin assembling the HydraSleeve™ by removing the HydraSleeve™ from the package and grasp top to “pop” open (Figure 1). Squeeze side fins together at top to bend reinforcing strips outward (Figure 2). Attach rope to hole at top of HydraSleeve™ (using cable ties) (Figure 3). Fold the two holes at bottom of HydraSleeve™ together and attach weight (using zip tie) (Figure 4). Sampler is ready to insert into the well at the predetermined depth specified in the site-specific workplan (Figure 5).

Figure 1

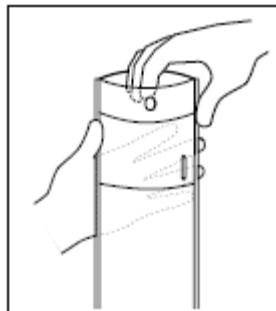


Figure 2

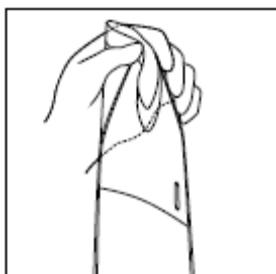


Figure 3

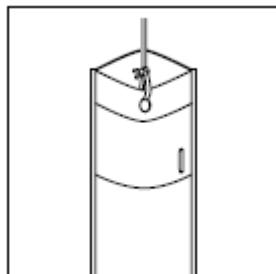


Figure 4

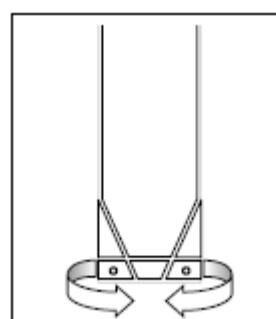
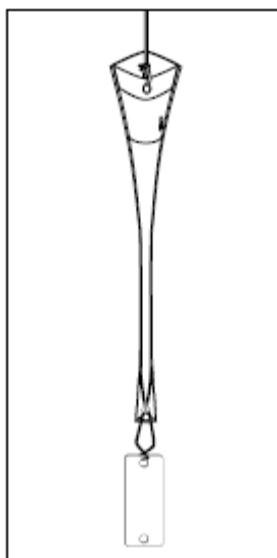


Figure 5



2. Two methods of deployment can be used. Either way, the top of the HydraSleeve™ will be positioned below the midpoint of the saturated screened interval by a distance approximately equal to 0.75 times the full length of the HydraSleeve™. For example, a 36" HydraSleeve™ will be lowered so that the top of the HydraSleeve™ is approximately 27" below the midpoint of the saturated screened interval. This position is appropriate to collect the groundwater sample from approximately the middle of the saturated screened interval when the HydraSleeve™ is pulled upward.
  - a. Bottom Anchor Deployment (preferred). Using the determined well depth, calculate the distance from the bottom of the well to the desired sampling depth (specified on the HydraSleeve™ Field Form. Attach an appropriate length anchor line between the weight and the bottom of the sampler and *slowly* lower the assembly until the weight rests on the bottom of the well, allowing the top of the sampler to float at the correct sampling depth. Attach the suspension line to the well cap to suspend the HydraSleeve™ at the correct depth until activated for sampling. Allow sufficient extra tether length such that if the tether becomes untied from the well cap and the sampler sinks to the bottom it may still be easily retrieved.
  - b. Top-Down Deployment. Measure the correct amount of suspension line needed to "hang" the top of the

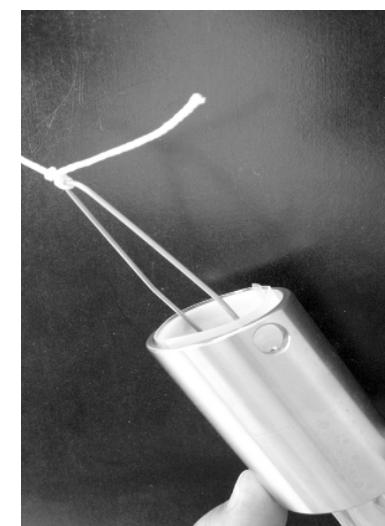
HydraSleeve™(s) at the desired sampling depth (specified on the HydraSleeve™ Field Form). Once constructed, slowly lower the assembly in the well and attach the suspension line to the well cap to suspend the HydraSleeve™ at the correct depth until activated for sampling. Allow sufficient extra tether length such that if the tether becomes untied from the well cap and the sampler sinks to the bottom it may still be easily retrieved.

3. For wells in which another passive sampling device (e.g., passive diffusion bag [PDB]) is to be used concurrently, the HydraSleeve™ should be suspended from the same line directly beneath the other passive sampler. If the top-down deployment method is used, care should be taken to ensure the weight is not resting on the bottom of the well. If necessary, the weight may be placed at the top of the HydraSleeve™, as described below.
  
4. For wells with screen lengths less than 10 feet (specified on the HydraSleeve™ Field Form) or where the saturated screen length is less than 10 feet (determined during water level gauging), top-down deployment will be used as described above with the exception of the placement of the weight. The weight for these wells will be placed on the top of the HydraSleeve™ as shown in the figure below (Photo 1). The hanging clip is inserted locking the top of the HydraSleeve™ and the weight together. The tether will be attached to the apex of the clip, as shown below (Photo 2).

Photo 1



Photo 2



5. At this point deployment is complete. The well must be allowed time for the stabilization of well water and formation water following any disturbance caused by the sampler deployment before groundwater samples can be collected. The manufacturer's recommended deployment time is hours to months. The time shall be specified in the site-specific workplan. The maximum deployment time at the site will be one year.
6. After the equilibration period is complete; the groundwater samples are ready to be collected for analysis.

#### **Assembly and Deployment of SuperSleeve-style HydraSleeve™ SS**

1. Begin assembling the HydraSleeve™ by removing the HydraSleeve™ SS from the package and attaching the bottom weight (Photos 3 and 4). Fold the two holes at bottom of HydraSleeve™ together. Open prongs of bottom weight clip by squeezing. Insert reusable weight clip through holes and attach the bottom weight.

Photo 3



Photo 4



2. Attach the top weight as follows: Insert the open (check valve) end of the HydraSleeve™ SS through the bottom of the stainless steel portion of top weight until about 1/2 inch of the open sleeve protrudes above the female threads. Thread stainless steel weight (female thread) onto PVC top piece (male thread) locking the top of the HydraSleeve SS between the threads (Photo 5).

Photo 5



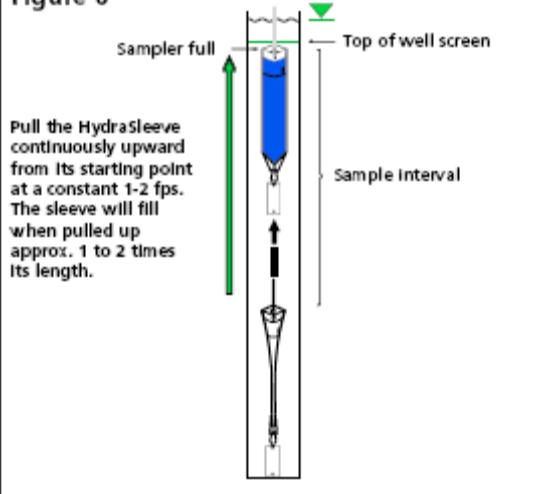
3. Attach rope to top weight (using cable ties).
4. Sampler is ready to insert into the well (Photo 6). Lower the HydraSleeve SS into the well until the bottom weight touches the bottom. Provide enough slack to allow the top weight to fully compress the sampler into the bottom of the well. For example, the 2-liter HydraSleeve™ SS (5-feet long) will compress to within 2 feet of bottom of a 2-inch well screen in about 4 hours. The 2-liter HydraSleeve™ SS requires about 5 feet of water over the top of the sampler to completely fill; thus it should not be used in wells with shorter than a 10-ft saturated screen length.

Photo 6

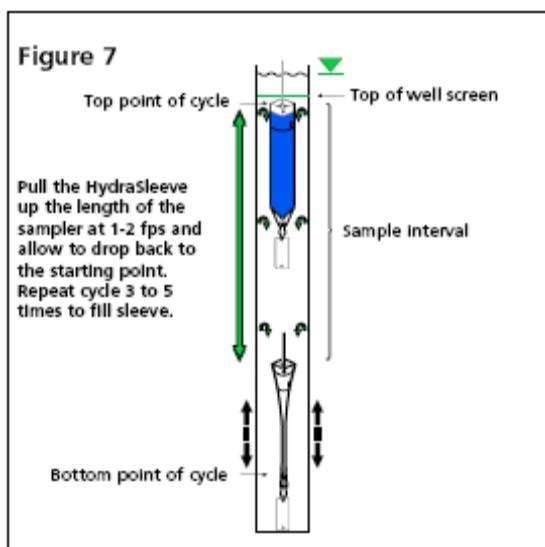


**Collecting Groundwater Samples from HydraSleeves™**

1. Conduct the Preliminary Site Activities detailed above with the following exception: The depth to groundwater should be collected prior to retrieval of the HydraSleeve™, while the total well depth should be collected only after the HydraSleeve™ has been retrieved from the well.
2. The Continuous Pull method is preferred and will be used for the majority of the wells. If the well to be sampled has a saturated screen length less than 10 feet in length, the Short Strokes method may be used. However, to minimize disturbance of well sediments, a preferable alternative is to use a top-weighted HydraSleeve deployment method (standard style HydraSleeve™ or SuperSleeve). The HydraSleeve™ Field Form will state the screen length and sample collection method for each well.
  - a. Continuous Pull method – The HydraSleeve™ must move upward at an approximate rate of one foot per second or faster (about the speed a bailer is usually pulled upward) for water to pass through the check valve into the sample sleeve. The total upward distance the check valve must travel to fill the sample sleeve is about 1 to 2 times the length of the sampler. For example, a 36-inch HydraSleeve™ needs a total upward movement of 36 to no more than 72 inches to fill. Pull the HydraSleeve™ continuously upward from its starting point at a constant 1 to 2 feet per second until full. This method usually provides the least turbid samples and is analogous to coring the water column from the bottom up (Figure 6).

**Figure 6**

- b. Short Strokes method – Pull the sampler upward at about 1 to 2 feet per second for the length of the sampler (36 inches) and let it drop back to the starting point. Repeat the cycle 3 to 5 times (Figure 7).
3. If the HydraSleeve™ is retrieved from the well and is not completely full, the sample will not be collected and a new HydraSleeve™ will be deployed. The replacement HydraSleeve™ will be allowed to equilibrate, as appropriate, prior to retrieval. After the equilibration time, the HydraSleeve™ may be collected again.



4. Collect sample parameters in the following order: VOCs (care should be taken to avoid agitation and volatilization of sample during the decanting process), explosives, metals, and other parameters. Samples will be collected and labeled in accordance with SOPs. Types of sample bottles and volume requirements for each analysis are provided in the Quality Assurance Project Plan (QAPP) and site-specific workplan. Metals samples will not be field filtered unless otherwise specified. If field filtering is required for any analyte, sample groundwater to be filtered will be decanted into an unpreserved bottle and filtered using a small hand pump as shown below in Photo 7.

5. The 36-inch long HydraSleeve™ has a capacity of 1 liter, and the largest (60-inch long) HydraSleeve™ SS for a 2-inch diameter well has a capacity of 2 liters. All groundwater samples, including QA/QC samples for a given well will be collected with one HydraSleeve™. If the volume requirement for sample analysis exceeds the capacity of the HydraSleeve™, it is not acceptable to redeploy the same or a second HydraSleeve to fill additional bottles. Rather, sampling of the well must be completely repeated. A larger size HydraSleeve™ must be deployed for the appropriate duration of time, or another approved sampling method (e.g., low-flow) must be used. Complete sample documentation on the Groundwater Sample Log.
6. Inspect the sampling bottles (obtained from the analytical laboratory prior to the sampling event) to be used to ensure that they are appropriate for the samples being collected, are undamaged, and have had the appropriate types and volumes of preservatives added. The types of sample containers to be used and sample preservation requirements will be provided in the site-specific workplan.

Photo 7



7. To remove a sample from the HydraSleeve™ with the least amount of aeration and agitation use the short plastic discharge tube (included). First, squeeze the full sampler just below the top to expel water resting above the flexible check valve (Photo 8).

Photo 8



8. Then, push the pointed discharge tube through the outer polyethylene sleeve about 3-4 inches below the white reinforcing strips (Photo 9).

Photo 9



9. Discharge the sample into the desired container in the order described in step 4 (Photo 10). Raising and lowering the bottom of the sampler or pinching the sample sleeve just below the discharge tube will control the flow of the sample. The sample sleeve can also be squeezed, forcing fluid up through the discharge tube, similar to squeezing a tube of toothpaste.

Photo 10



10. To obtain a duplicate/blind duplicate sample, collect a duplicate from the same bag as an original sample and send for analysis with the appropriate labeling.
11. To obtain an equipment blank, pour deionized water into a HydraSleeve and collect the blank using the same method as the samples and send for analysis with the appropriate labeling.
12. Place collected samples immediately in a sample cooler that is already full of ice or ice packs such that the samples are immediately chilled and stored at a temperature of 4 degrees Celsius, in accordance with SOPs.
13. Record depth to groundwater and total well depth.
14. Field parameters will be collected mid-screen from wells specified in the site-specific workplan. Calibrate all field analytical test equipment (e.g., pH, temperature, conductivity, ORP, turbidity, and DO) according to the instrument manufacturer's specifications and SOPs. Daily calibration results will be recorded on the appropriate form(s) as specified by the FSP and site-specific workplans. Instruments that cannot be calibrated according to the manufacturer's specifications will be removed from service and tagged.
15. Field parameter measurements (temperature, specific conductance, pH, DO, and ORP) will be taken after the HydraSleeve™ is removed from the well and the groundwater samples collected. This would occur through the use of a down-hole multi-meter (e.g., a YSI 600XL). Gently lower the probe of the meter down the well until it reaches the middle of the screen (screen intervals are found on the HydraSleeve™ Field Form). Follow the manufacturer's guidelines on how to determine

stability of parameter readings. Once the meter readings have stabilized, record them on the HydraSleeve™ Field Form. Turbidity will be measured from groundwater taken directly from the HydraSleeve™, after analytical samples have been dispensed.

16. After the groundwater samples and field measurements have been collected, it may be necessary to deploy another HydraSleeve™ in the well for future sampling events (e.g., quarterly, semi-annually, etc.). The site-specific workplan will state if another HydraSleeve™ is to be deployed. The same suspension line will be reused for additional deployment to ensure consistency in the deployment depth. Follow the steps outlined previously in this SOP for deployment instructions.
17. Secure the well.
18. Properly dispose of PPE and disposable equipment.
19. Decontaminate any cutting devices, reusable weights, suspension lines, or sampler attachment mechanisms after each usage in accordance with SOPs.

## **VII. Waste Management**

Any unused water from the PDB sampler and water used to decontaminate cutting devices should be disposed following SOPs and in accordance with local, State, and Federal regulations.

## **VIII. Data Recording and Management**

All data will be recorded on HydraSleeve™ field forms and groundwater sampling field forms. Daily field logs will be maintained. Records generated as a result of this SOP will be controlled and maintained in the project record files in accordance with project requirements.

## **IX. Quality Assurance**

Quality assurance procedures shall be conducted in accordance with the site-specific QAPP.

## X. References

Cordry, K.E., 2006. HydraSleeve™ Field Manual. Las Cruces, N.M.: GeoInsight, Inc.

[http://www.hydrasleeve.com/images/stories/support/HydraSleeve\\_No-Purge\\_manual\\_updated.pdf](http://www.hydrasleeve.com/images/stories/support/HydraSleeve_No-Purge_manual_updated.pdf)

GeoInsight, Inc. 2010a. Standard Operating Procedure: Sampling Groundwater With a HydraSleeve™. Las Cruces, N.M.: GeoInsight, Inc.

[http://www.hydrasleeve.com/images/stories/support/HydraSleeve\\_SOP.pdf](http://www.hydrasleeve.com/images/stories/support/HydraSleeve_SOP.pdf)

GeoInsight, Inc. 2010b. SuperSleeve Assembly Instructions. Las Cruces, N.M.

[http://www.hydrasleeve.com/images/stories/support/SSfield\\_manual.pdf](http://www.hydrasleeve.com/images/stories/support/SSfield_manual.pdf)

Interstate Technology and Regulatory Council. 2004. Technical and Regulatory Guidance for Using Polyethylene Diffusion Bag Samplers to Monitor Volatile Organic Compounds in Groundwater. February.

## XI. Attachments

A. HydraSleeve™ Field Form

B. Calculation Of Maximum Required Equilibration Period (Flush-Out Time) Based On Well Geometry And Darcy Velocity



## HydraSleeve™ Field Form

Site: \_\_\_\_\_

Location: \_\_\_\_\_

Well ID: \_\_\_\_\_

Well Type:  Monitoring  Other: \_\_\_\_\_

Well Finish:  Stick Up  Flush Mount \_\_\_\_\_

Measuring Pt:  Top of Casing  Other (specify): \_\_\_\_\_

Total Depth As Constructed (ft bgs): \_\_\_\_\_ Screened Interval (ft bgs): \_\_\_\_\_

Well Casing: Diameter: \_\_\_\_\_ Material: \_\_\_\_\_

Well Screen: Diameter: \_\_\_\_\_

### Deployment

Date and Time of Deployment: Date: \_\_\_\_\_ Time: \_\_\_\_\_

Weather Conditions: \_\_\_\_\_

Depth to groundwater at time of deployment: \_\_\_\_\_

Total well depth at time of deployment: \_\_\_\_\_

Dimensions of HydraSleeve™: Length (in.) \_\_\_\_\_ Diameter (in.) \_\_\_\_\_

Deployment Method/Position of Weight:

Bottom Anchor: Weight attached to bottom of HydraSleeve™. Weight rests on well bottom.

Top-Down: Weight attached to bottom of HydraSleeve™. Weight suspended in well.

Top-Down: Weight attached to top of HydraSleeve™. Weight suspended in well.

Deployment Depth (Top of HydraSleeve™) (ft bgs): \_\_\_\_\_

### Retrieval

Date and Time of Retrieval: Date: \_\_\_\_\_ Time: \_\_\_\_\_

Total # of days deployed: \_\_\_\_\_

Weather Conditions: \_\_\_\_\_

Retrieval Method:  Continuous Pull (preferred)  
 Short Strokes

Depth to groundwater at time of retrieval (measured before retrieval): \_\_\_\_\_

Total well depth at time of retrieval (measured after retrieval): \_\_\_\_\_

Downhole Field Parameters Upon Retrieval:

Temp: \_\_\_\_\_ (°C) ORP: \_\_\_\_\_ (mV) Water quality meter: \_\_\_\_\_

pH: \_\_\_\_\_ DO: \_\_\_\_\_ (mg/L) Serial #: \_\_\_\_\_

Turbidity of Groundwater Sample (dispensed from HydraSleeve™):

Turbidity: \_\_\_\_\_ (NTU) Turbidity meter: \_\_\_\_\_ Serial #: \_\_\_\_\_

Notes/Observations:

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Field Sampling Technician: Name(s) and Company

Name

Company

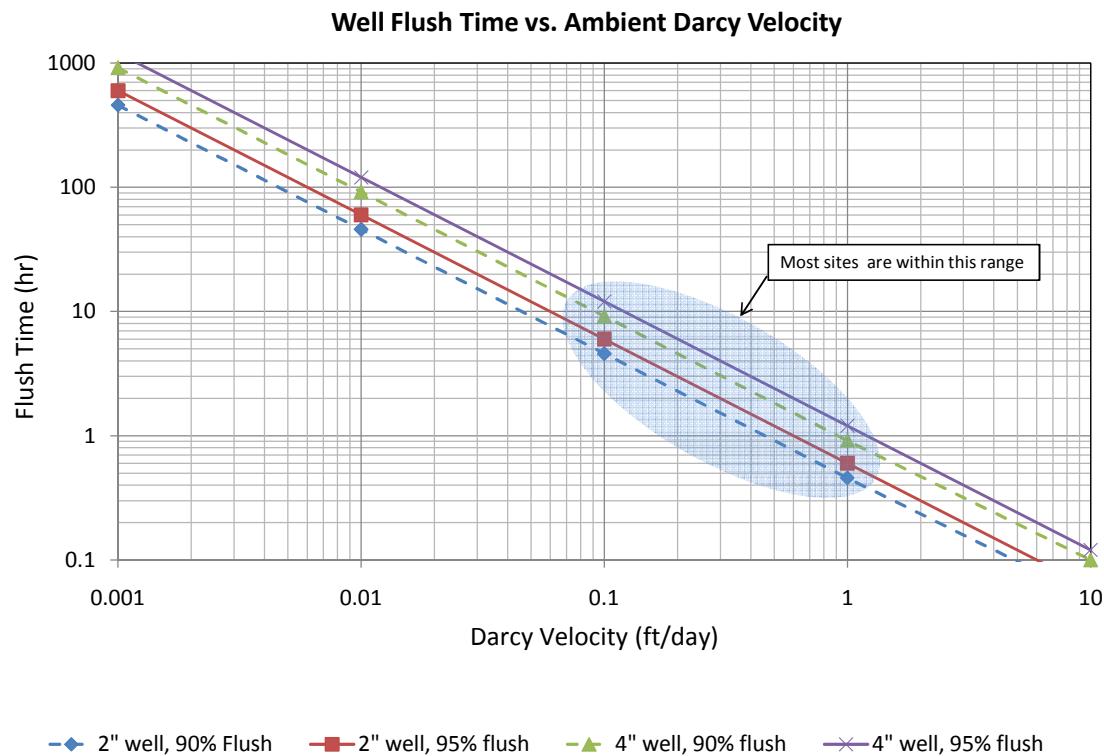
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**ATTACHMENT B**  
**CALCULATION OF MAXIMUM REQUIRED EQUILIBRATION PERIOD (FLUSH-OUT TIME) BASED ON WELL GEOMETRY AND DARCY VELOCITY**

Example Calculations			
Well Diam (inches)	Darcy v (ft/day)	Flush %	Flush Time (hours)
2	0.001	90	458
2	0.01	90	46
2	0.1	90	4.6
2	1	90	0.46
2	10	90	0.05
2	0.001	95	600
2	0.01	95	60
2	0.1	95	6.0
2	1	95	0.60
2	10	95	0.06
4	0.001	90	917
4	0.01	90	92
4	0.1	90	9.2
4	1	90	0.92
4	10	90	0.10
4	0.001	95	1200
4	0.01	95	120
4	0.1	95	12.0
4	1	95	1.20
4	10	95	0.12

General Equation for Flushing Time	
$t = [0.25 wd / (vd cf)] [-\ln(1-f)]$	
where:	
td = maximum required flushing time (hours)	
wd = well diameter (inches)	
vd = Darcy velocity, Ki (feet per day)	
K = hydraulic conductivity (feet per day)	
i = hydraulic gradient (dimensionless)	
cf = flow convergence factor (typically between 2 and 3)	
example calcs. assume cf = 2.5	
f = % flush expressed as fraction	
(e.g., 95% = 0.95, 90% = 0.90, etc.)	



(Based on: Gaspar, E., and M. Onescu. 1972. Radioactive tracers in hydrology. Elsevier Publishing Co., Amsterdam)

## **Low Flow Purging and Sampling SOP**

Low-flow refers to the velocity with which water enters the pump intake and that is imparted to the formation pore water in the immediate vicinity of the well screen. It does not necessarily refer to the flow rate of water discharged at the surface, which can be affected by flow regulators or restrictions. Water level drawdown provides the best indication of the stress imparted by a given flow-rate for a given hydrogeological situation. The objective is to pump in a manner that minimizes stress (drawdown) to the system to the extent practical. Typically, flow rates on the order of 100 to 500 milliliters per minute are used. Performance criteria include achieving stabilization of five common water quality parameters measured with an in-line flow cell. These typically stabilize in the following order: pH, temperature, specific conductance, redox, and DO. Of these, USEPA considers DO to be the most sensitive in indicating that formation water is being sampled and thus water samples are representative of the aquifer. Guidance on low-flow sampling procedures is provided by USEPA (1996a and 1996b).

- Measure initial depth-to-water.
- Connect pump and tubing at well head and begin purging.
- Measure drawdown in well during purging and record on FSDS.
- Record field parameters pH, specific conductance, and temperature with flow-through cell attached to discharge line. Each of these parameters should stabilize relatively rapidly to within criteria listed by the USEPA on the basis of historical results. Stabilization is change of less than 10 percent.
- After field parameters stabilize and/or minimum purge volume removed, collect water quality samples.
- Field parameters will be measured at selected intervals during purging. Sufficient measurements will be taken to document changes in the parameters.
- The frequency and total number of measurements will depend on well productivity. Generally, field parameters will be recorded every 2-5 minutes.
- Field parameters will be recorded on the field sampling data sheet.

**Attachment C**

Field Sampling Forms



## HydraSleeve™ Field Form

2066

27

2093

Site: 1001868  
Location: FRONT AVE  
Well ID: B-30  
Well Type:  Monitoring  Other:  
Well Finish:  Stick Up  Flush Mount  
Measuring Pt:  Top of Casing  Other (specify): \_\_\_\_\_  
Total Depth As Constructed (ftbgs): Screened Interval (ftbgs):  
Well Casing: Diameter: 2 Material: PVC  
Well Screen: Diameter: 2

## Deployment

Date and Time of Deployment:	Date: 09/03/15	Time: 14:15
Weather Conditions:	Rain 60°	
Depth to groundwater at time of deployment:	16.21 FT	
Total well depth at time of deployment:	2Q 2015	28.69
Dimensions of HydraSleeve™: Length (in.)	60	Diameter (in.) 2
Deployment Method/Position of Weight:	<input checked="" type="checkbox"/> Bottom Anchor: Weight attached to bottom of HydraSleeve™. Weight rests on well bottom. <input type="checkbox"/> Top-Down: Weight attached to bottom of HydraSleeve™, Weight suspended in well. <input type="checkbox"/> Top-Down: Weight attached to top of HydraSleeve™. Weight suspended in well.	
Deployment Depth (Top of HydraSleeve™) (ftbgs):	27.69	

## Retrieval

Date and Time of Retrieval:	Date: 9/8/15	Time: 10:40
Total # of days deployed:	5	
Weather Conditions:	Sunny, 75°F	
Depth to groundwater at time of retrieval:	16.25	
Total well depth at time of retrieval:	—	
Downhole Field Parameters Upon Retrieval:		
Temp: 18.59 (°C)	ORP: -60 (mV)	Water quality meter: HORIBA
pH: 6.55	DO: 10.3 (mg/L)	Serial #: 621832

## Notes/Observations:

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## Field Sampling Technician: Name(s) and Company

Name

Company

MA/BF

ARCADIS



## HydraSleeve™ Field Form

11  
2096  
28

2424

2124

Site: 1001868  
Location: FRONT AVE  
Well ID: B-29  
Well Type:  Monitoring  Other:  
Well Finish:  Stick Up  Flush Mount  
Measuring Pt:  Top of Casing  Other (specify): \_\_\_\_\_  
Total Depth As Constructed (ftbgs): \_\_\_\_\_ Screened Interval (ftbgs): \_\_\_\_\_  
Well Casing: Diameter: 2 Material: PVC  
Well Screen: Diameter: 2

## Deployment

Date and Time of Deployment:	Date: 09/03/15	Time: 14:40
Weather Conditions:	RAIN	
Depth to groundwater at time of deployment:	16.30	
Total well depth at time of deployment:	2Q 2015	29.39
Dimensions of HydraSleeve™: Length (in.)	60	Diameter (in.) 2
Deployment Method/Position of Weight:	<input checked="" type="checkbox"/> Bottom Anchor: Weight attached to bottom of HydraSleeve™. Weight rests on well bottom. <input type="checkbox"/> Top-Down: Weight attached to bottom of HydraSleeve™. Weight suspended in well. <input type="checkbox"/> Top-Down: Weight attached to top of HydraSleeve™. Weight suspended in well.	
Deployment Depth (Top of HydraSleeve™) (ftbgs):	28	

## Retrieval

Date and Time of Retrieval:	Date: 09/08/15	Time: 11:20
Total # of days deployed:	5	
Weather Conditions:	Sunny 70°	
Depth to groundwater at time of retrieval:	16.44	
Total well depth at time of retrieval:	28	
Downhole Field Parameters Upon Retrieval:		
Temp: 19.35 (°C)	ORP: 94 (mV)	Water quality meter: HORIZIBA
pH: 6.68	DO: 11.23 (mg/L)	Serial #: 621832

## Notes/Observations:

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## Field Sampling Technician: Name(s) and Company

BF / Name  
MACompany  
ANA



## HydraSleeve™ Field Form

2127

29

2156

2184

DUPLICATE

LOOP IN TOP Hydrasleeve

Site:	1001868	
Location:	FRONT AVE	
Well ID:	B-28	
Well Type:	<input type="checkbox"/> Monitoring	<input type="checkbox"/> Other:
Well Finish:	<input type="checkbox"/> Stick Up	<input type="checkbox"/> Flush Mount
Measuring Pt:	<input type="checkbox"/> Top of Casing	<input type="checkbox"/> Other (specify): _____
Total Depth As Constructed (ftbgs):	Screened Interval (ftbgs): _____	
Well Casing:	Diameter: 2	Material: PVC
Well Screen:	Diameter: 2	

**Deployment**

Date and Time of Deployment:	Date: 09/03/15	Time: 14:53
Weather Conditions:	Cloudy (20%)	
Depth to groundwater at time of deployment:	16.11	
Total well depth at time of deployment:	2Q 2015	30.53
Dimensions of HydraSleeve™: Length (in.)	60	Diameter (in.) 2
Deployment Method/Position of Weight:	<input checked="" type="checkbox"/> Bottom Anchor: Weight attached to bottom of HydraSleeve™. Weight rests on well bottom. <input type="checkbox"/> Top-Down: Weight attached to bottom of HydraSleeve™. Weight suspended in well. <input type="checkbox"/> Top-Down: Weight attached to top of HydraSleeve™. Weight suspended in well.	
Deployment Depth (Top of HydraSleeve™) (ftbgs):	29.53	

**Retrieval**

Date and Time of Retrieval:	Date: 9/8/15	Time: 13:00
Total # of days deployed:	5	
Weather Conditions:	SUNNY, 75°F	
Depth to groundwater at time of retrieval:	16.21	
Total well depth at time of retrieval:	—	
Downhole Field Parameters Upon Retrieval:		
Temp: 19.35 (°C)	ORP: 94 (mV)	Water quality meter: HORIBA
pH: 6.68	DO: 11.23 (mg/L)	Serial #: 621832

**Notes/Observations:**

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**Field Sampling Technician: Name(s) and Company**

Name	Company
MA/BF	ARCADIS



## HydraSleeve™ Field Form

2179  
22  
2201

Site: 1001868  
Location: MTD YARD  
Well ID: CR-28A  
Well Type:  Monitoring  Other:  
Well Finish:  Stick Up  Flush Mount  
Measuring Pt:  Top of Casing  Other (specify): \_\_\_\_\_  
Total Depth As Constructed (ftbgs): 200 Screened Interval (ftbgs): \_\_\_\_\_  
Well Casing: Diameter: 2 Material: PVC  
Well Screen: Diameter: 2

## Deployment

Date and Time of Deployment:	Date: <u>9/3/15</u>	Time: <u>1530</u>
Weather Conditions:	<u>PARTLY CLOUDY</u>	
Depth to groundwater at time of deployment:	<u>16.45</u>	
Total well depth at time of deployment:	2Q 2015	<u>23.01</u>
Dimensions of HydraSleeve™: Length (in.)	<u>60</u>	Diameter (in.) <u>2</u>
Deployment Method/Position of Weight:	<input checked="" type="checkbox"/> Bottom Anchor: Weight attached to bottom of HydraSleeve™. Weight rests on well bottom. <input type="checkbox"/> Top-Down: Weight attached to bottom of HydraSleeve™. Weight suspended in well. <input type="checkbox"/> Top-Down: Weight attached to top of HydraSleeve™. Weight suspended in well.	
Deployment Depth (Top of HydraSleeve™) (ftbgs):	<u>22</u>	

## Retrieval

Date and Time of Retrieval:	Date: <u>9/8/15</u>	Time: <u>1500</u>
Total # of days deployed:	<u>5</u>	
Weather Conditions:	<u>SUNNY, 75°F</u>	
Depth to groundwater at time of retrieval:	<u>16.45</u>	
Total well depth at time of retrieval:	<u>—</u>	
Downhole Field Parameters Upon Retrieval:		
Temp: <u>19.35</u> (°C)	ORP: <u>94</u> (mV)	Water quality meter: <u>HORIBA</u>
pH: <u>6.68</u>	DO: <u>11.23</u> (mg/L)	Serial #: <u>021832</u>

## Notes/Observations:

## Field Sampling Technician: Name(s) and Company

Name MA/BF Company ARCADIS

2204

48

2252



## HydraSleeve™ Field Form

Site: 1001868

Location: MTD YARD

Well ID: CR-28B

Well Type:  Monitoring  Other:Well Finish:  Stick Up  Flush MountMeasuring Pt:  Top of Casing  Other (specify): \_\_\_\_\_

Total Depth As Constructed (ftbgs): Screened Interval (ftbgs): \_\_\_\_\_

Well Casing: Diameter: 2 Material: PVC

Well Screen: Diameter: 2

**Deployment**

Date and Time of Deployment: Date: 9/3/15 Time: 15:42

Weather Conditions: Partly cloudy, 72°F

Depth to groundwater at time of deployment: 15.62

Total well depth at time of deployment: 2Q 2015 49.78

Dimensions of HydraSleeve™: Length (in.) 60 Diameter (in.) 2

Deployment Method/Position of Weight:

Bottom Anchor: Weight attached to bottom of HydraSleeve™. Weight rests on well bottom.

Top-Down: Weight attached to bottom of HydraSleeve™. Weight suspended in well.

Top-Down: Weight attached to top of HydraSleeve™. Weight suspended in well.

Deployment Depth (Top of HydraSleeve™) (ftbgs): 48.78

**Retrieval**

Date and Time of Retrieval: Date: 9/8/15 Time: 15:30

Total # of days deployed: 5

Weather Conditions: Sunny, 48°F

Depth to groundwater at time of retrieval: 16.22

Total well depth at time of retrieval: \_\_\_\_\_

## Downhole Field Parameters Upon Retrieval:

Temp: 19.35 (°C) ORP: 94 (mV) Water quality meter: HORIBA

pH: 6.68 DO: 11.23 (mg/L) Serial #: 21832

**Notes/Observations:**

INSUFFICIENT SAMPLE VOLUME, NO DISSOLVE  
METALS COLLECTED.

**Field Sampling Technician: Name(s) and Company**

Name

Company

MA/BE.

ARCADIS



## HydraSleeve™ Field Form

2318  
75  
2235  
77  
2312

Site: 1001868  
Location: MTD YARD  
Well ID: CR-28C

DUPPLICATE  
LOOPEd @ TOP.

Well Type:  Monitoring  Other:  
Well Finish:  Stick Up  Flush Mount

Measuring Pt:  Top of Casing  Other (specify): \_\_\_\_\_

Total Depth As Constructed (ftbgs): Screened Interval (ftbgs): \_\_\_\_\_

Well Casing: Diameter: 2 Material: PVC

Well Screen: Diameter: 2

## Deployment

Date and Time of Deployment: Date: 9/3/15 Time: \_\_\_\_\_

Weather Conditions: Partly Cloudy, 73°F

Depth to groundwater at time of deployment: 15.67

Total well depth at time of deployment: 2Q 2015 78.85

Dimensions of HydraSleeve™: Length (in.) 60 Diameter (in.) 2

## Deployment Method/Position of Weight:

- Bottom Anchor: Weight attached to bottom of HydraSleeve™. Weight rests on well bottom.
- Top-Down: Weight attached to bottom of HydraSleeve™. Weight suspended in well.
- Top-Down: Weight attached to top of HydraSleeve™. Weight suspended in well.

Deployment Depth (Top of HydraSleeve™) (ftbgs): 77.85

## Retrieval

Date and Time of Retrieval: Date: 9/8/15 Time: 15:30

Total # of days deployed: 5

Weather Conditions: Sunny, 70°F

Depth to groundwater at time of retrieval: 15.02

Total well depth at time of retrieval: \_\_\_\_\_

## Downhole Field Parameters Upon Retrieval:

Temp: 23.22 (°C) ORP: -33 (mV) Water quality meter: HORIBA

pH: 7.32 DO: 11.08 (mg/L) Serial #: 021832

## Notes/Observations:

VERY TURBID WATER IN DUPLICATE.

## Field Sampling Technician: Name(s) and Company

MA/BF

Name

Company

ARCADIS



2396  
32  
2428

## HydraSleeve™ Field Form

Site: 1001868  
Location: MTD YARD  
Well ID: B-11  
Well Type:  Monitoring  Other:  
Well Finish:  Stick Up  Flush Mount  
Measuring Pt:  Top of Casing  Other (specify): \_\_\_\_\_  
Total Depth As Constructed (ftbgs): Screened Interval (ftbgs):  
Well Casing: Diameter: 2 Material: PVC  
Well Screen: Diameter: 2

### Deployment

Date and Time of Deployment:	Date: 09/04/15	Time: 11:40
Weather Conditions:	Sunny 70°	
Depth to groundwater at time of deployment:	16.15	
Total well depth at time of deployment:	2Q 2015	33.71
Dimensions of HydraSleeve™: Length (in.)	60	Diameter (in.) 2
Deployment Method/Position of Weight:	<input checked="" type="checkbox"/> Bottom Anchor: Weight attached to bottom of HydraSleeve™. Weight rests on well bottom. <input type="checkbox"/> Top-Down: Weight attached to bottom of HydraSleeve™. Weight suspended in well. <input type="checkbox"/> Top-Down: Weight attached to top of HydraSleeve™. Weight suspended in well.	
Deployment Depth (Top of HydraSleeve™) (ftbgs):	32.71	

### Retrieval

Date and Time of Retrieval:	Date: 9/9/15	Time: 11:30
Total # of days deployed:	5	
Weather Conditions:	PARTLY CLOUDY, 70°F	
Depth to groundwater at time of retrieval:	16.18	
Total well depth at time of retrieval:	—	
Downhole Field Parameters Upon Retrieval:		
Temp: 19.19 (°C)	ORP: -116 (mV)	Water quality meter: HORIZON
pH: 6.77	DO: 9.53 (mg/L)	Serial #: 021832

### Notes/Observations:

Field Sampling Technician: Name(s) and Company

Name	Company
MA/BF/HD	ARCADIS



## HydraSleeve™ Field Form

2450

Site: 1001868  
Location: MTD TANK YARD  
Well ID: CR-29A  
Well Type:  Monitoring  Other: \_\_\_\_\_  
Well Finish:  Stick Up  Flush Mount \_\_\_\_\_  
Measuring Pt:  Top of Casing  Other (specify): \_\_\_\_\_  
Total Depth As Constructed (ftbgs): \_\_\_\_\_ Screened Interval (ftbgs): \_\_\_\_\_  
Well Casing: Diameter: 2 Material: PVC  
Well Screen: Diameter: 2

**Deployment**

Date and Time of Deployment:	Date: 09/04/15	Time: 11:45
Weather Conditions:	Sunny 70°	
Depth to groundwater at time of deployment:	15.33	
Total well depth at time of deployment:	2Q 2015	21.52
Dimensions of HydraSleeve™: Length (in.)	60	Diameter (in.) 2
Deployment Method/Position of Weight:	<input checked="" type="checkbox"/> Bottom Anchor: Weight attached to bottom of HydraSleeve™. Weight rests on well bottom. <input type="checkbox"/> Top-Down: Weight attached to bottom of HydraSleeve™. Weight suspended in well. <input type="checkbox"/> Top-Down: Weight attached to top of HydraSleeve™. Weight suspended in well.	
Deployment Depth (Top of HydraSleeve™) (ftbgs):	20.52	

**Retrieval**

Date and Time of Retrieval:	Date: _____	Time: _____
Total # of days deployed:	_____	
Weather Conditions:	_____	
Depth to groundwater at time of retrieval:	_____	
Total well depth at time of retrieval:	_____	
Downhole Field Parameters Upon Retrieval:		
Temp: _____ (°C)	ORP: _____ (mV)	Water quality meter: _____
pH: _____	DO: _____ (mg/L)	Serial #: _____

**Notes/Observations:**

IN SUFFICIENT Sample Volume No Sample Collected

**Field Sampling Technician: Name(s) and Company**Name  
BF MACompany  
ANA



2450  
u 9  
2499

## HydraSleeve™ Field Form

Site: 1001868  
Location: MTD TANK YARD  
Well ID: CR-29B  
Well Type:  Monitoring  Other:  
Well Finish:  Stick Up  Flush Mount  
Measuring Pt:  Top of Casing  Other (specify): \_\_\_\_\_  
Total Depth As Constructed (ftbgs): Screened Interval (ftbgs):  
Well Casing: Diameter: 2 Material: PVC  
Well Screen: Diameter: 2

### Deployment

Date and Time of Deployment:	Date: 09/04/15	Time: 11:50
Weather Conditions:	Sunny 70°	
Depth to groundwater at time of deployment:	16.88	
Total well depth at time of deployment:	2Q 2015	50.35
Dimensions of HydraSleeve™: Length (in.)	60	Diameter (in.) 2
Deployment Method/Position of Weight:	<input checked="" type="checkbox"/> Bottom Anchor: Weight attached to bottom of HydraSleeve™. Weight rests on well bottom. <input type="checkbox"/> Top-Down: Weight attached to bottom of HydraSleeve™. Weight suspended in well. <input type="checkbox"/> Top-Down: Weight attached to top of HydraSleeve™. Weight suspended in well.	
Deployment Depth (Top of HydraSleeve™) (ftbgs):	49	

### Retrieval

Date and Time of Retrieval:	Date: 9/9/15	Time: 14:20
Total # of days deployed:	5	
Weather Conditions:	Sunny, 78°F	
Depth to groundwater at time of retrieval:	17.43	
Total well depth at time of retrieval:		
Downhole Field Parameters Upon Retrieval:		
Temp: 19.19°C	ORP: -116 (mV)	Water quality meter: HORIBA
pH: 6.77	DO: 9.53 (mg/L)	Serial #: _____

### Notes/Observations:

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### Field Sampling Technician: Name(s) and Company

Name	Company
MA/BF/HO	ARCADIS



2502  
31  
2533

## HydraSleeve™ Field Form

Site: 1001868  
Location: MTD YARD  
Well ID: B-26  
Well Type:  Monitoring  Other:  
Well Finish:  Stick Up  Flush Mount  
Measuring Pt:  Top of Casing  Other (specify): \_\_\_\_\_  
Total Depth As Constructed (ftbgs): Screened Interval (ftbgs):  
Well Casing: Diameter: 2 Material: PVC  
Well Screen: Diameter: 2

### Deployment

Date and Time of Deployment:	Date: 09/04/15	Time: 12:00
Weather Conditions:	Sunny 70°	
Depth to groundwater at time of deployment:	16.68	
Total well depth at time of deployment:	2Q 2015	32.83
Dimensions of HydraSleeve™: Length (in.)	60	Diameter (in.) 2
Deployment Method/Position of Weight:	<input checked="" type="checkbox"/> Bottom Anchor: Weight attached to bottom of HydraSleeve™. Weight rests on well bottom. <input type="checkbox"/> Top-Down: Weight attached to bottom of HydraSleeve™. Weight suspended in well. <input type="checkbox"/> Top-Down: Weight attached to top of HydraSleeve™. Weight suspended in well.	
Deployment Depth (Top of HydraSleeve™) (ftbgs):	31.83	

### Retrieval

Date and Time of Retrieval:	Date: 9/9/15	Time: 16:35
Total # of days deployed:	5	
Weather Conditions:	Sunny 80°	
Depth to groundwater at time of retrieval:	17.70	
Total well depth at time of retrieval:		
Downhole Field Parameters Upon Retrieval:		
Temp: 19.19 (°C)	ORP: -116 (mV)	Water quality meter: Horiba
pH: 6.77	DO: 9.53 (mg/L)	Serial #: 021832

### Notes/Observations:

COLLECTED TRAPs, Gx and Dx ALTHOUGH NOT INDICATED IN SPREADSHEET.

### Field Sampling Technician: Name(s) and Company

Name HAO

Company

ARCADIS



## HydraSleeve™ Field Form

2533  
31  
2563

Site: 1001868

Location: MTD YARD

Well ID: B-10

Well Type:  Monitoring  Other:  
 Stick Up  Flush MountMeasuring Pt:  Top of Casing  Other (specify): \_\_\_\_\_

Total Depth As Constructed (ftbgs): Screened Interval (ftbgs): \_\_\_\_\_

Well Casing: Diameter: 2 Material: PVC

Well Screen: Diameter: 2

## Deployment

Date and Time of Deployment: Date: 9/4 Time: 12:25

Weather Conditions: SUNNY, 70°F

Depth to groundwater at time of deployment: 16.22

Total well depth at time of deployment: 2Q 2015 32.36

Dimensions of HydraSleeve™: Length (in.) 60 Diameter (in.) 2

## Deployment Method/Position of Weight:

- Bottom Anchor: Weight attached to bottom of HydraSleeve™. Weight rests on well bottom.  
 Top-Down: Weight attached to bottom of HydraSleeve™. Weight suspended in well.  
 Top-Down: Weight attached to top of HydraSleeve™. Weight suspended in well.

Deployment Depth (Top of HydraSleeve™) (ftbgs): 31

## Retrieval

Date and Time of Retrieval: Date: 9/9/18 Time: 15:10

Total # of days deployed: 5

Weather Conditions: Sunny 80°F

Depth to groundwater at time of retrieval: 16.24

Total well depth at time of retrieval: —

## Downhole Field Parameters Upon Retrieval:

Temp: 19.19 (°C) ORP: ~116 (mV) Water quality meter: Horiba  
pH: 6.77 DO: 9.53 (mg/L) Serial #: 021832

## Notes/Observations:

odor observed

## Field Sampling Technician: Name(s) and Company

Name HAO

Company ARCADIS



## HydraSleeve™ Field Form

11  
2595  
29  
2624

Site: 1001868  
Location: MTD YARD  
Well ID: B-7  
Well Type:  Monitoring  Other:  
Well Finish:  Stick Up  Flush Mount  
Measuring Pt:  Top of Casing  Other (specify): \_\_\_\_\_  
Total Depth As Constructed (ftbgs): Screened Interval (ftbgs):  
Well Casing: Diameter: 2 Material: PVC  
Well Screen: Diameter: 2

## Deployment

Date and Time of Deployment:	Date: 9/4/15	Time: 1300
Weather Conditions:	SUNNY, 72°F	
Depth to groundwater at time of deployment:	16.02	
Total well depth at time of deployment:	2Q 2015 30.09	
Dimensions of HydraSleeve™: Length (in.)	60	Diameter (in.) 2
Deployment Method/Position of Weight:	<input type="checkbox"/> Bottom Anchor: Weight attached to bottom of HydraSleeve™. Weight rests on well bottom. <input type="checkbox"/> Top-Down: Weight attached to bottom of HydraSleeve™. Weight suspended in well. <input type="checkbox"/> Top-Down: Weight attached to top of HydraSleeve™. Weight suspended in well.	
Deployment Depth (Top of HydraSleeve™) (ftbgs):	29	

## Retrieval

Date and Time of Retrieval:	Date: 9/4/15	Time: 1430
Total # of days deployed:	10	
Weather Conditions:	CLOUDY, 60°F	
Depth to groundwater at time of retrieval:	16.06	
Total well depth at time of retrieval:	—	
Downhole Field Parameters Upon Retrieval:		
Temp: 16.75 (°C)	ORP: -56 (mV)	Water quality meter: HORIZ RA
pH: 6.64	DO: 12.94 (mg/L)	Serial #: 021832

## Notes/Observations:

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## Field Sampling Technician: Name(s) and Company

Name	Company
mA/HB	ARCADIS



## HydraSleeve™ Field Form

Site: 1001868  
Location: MTD YARD  
Well ID: CR-26  
Well Type:  Monitoring  Other:  
Well Finish:  Stick Up  Flush Mount  
Measuring Pt:  Top of Casing  Other (specify): \_\_\_\_\_  
Total Depth As Constructed (ftbgs): \_\_\_\_\_ Screened Interval (ftbgs): \_\_\_\_\_  
Well Casing: Diameter: 2 Material: PVC  
Well Screen: Diameter: 2

DUPPLICATE

DUP. IN  
WOP.

## Deployment

Date and Time of Deployment:	Date: 9/4/15	Time: 1310
Weather Conditions:	SUNNY, 72°F	
Depth to groundwater at time of deployment:	21.17	
Total well depth at time of deployment:	2Q 2015	59.55
Dimensions of HydraSleeve™: Length (in.)	60	Diameter (in.) 2
Deployment Method/Position of Weight:	<input type="checkbox"/> Bottom Anchor: Weight attached to bottom of HydraSleeve™. Weight rests on well bottom. <input type="checkbox"/> Top-Down: Weight attached to bottom of HydraSleeve™. Weight suspended in well. <input type="checkbox"/> Top-Down: Weight attached to top of HydraSleeve™. Weight suspended in well.	
Deployment Depth (Top of HydraSleeve™) (ftbgs):	58.55	

## Retrieval

Date and Time of Retrieval:	Date: 9/14/15	Time: 09:15
Total # of days deployed:	10	
Weather Conditions:	Overcast, 60°	
Depth to groundwater at time of retrieval:	29.00	
Total well depth at time of retrieval:	—	
Downhole Field Parameters Upon Retrieval:		
Temp: 15.40 (°C)	ORP: -78 (mV)	Water quality meter: Honka
pH: 6.44	DO: 9.97 (mg/L)	Serial #: 021832

## Notes/Observations:

## Field Sampling Technician: Name(s) and Company

Name

HPO

Company

ARCADIS

2743  
73

2814

## HydraSleeve™ Field Form

Site: 1001868  
Location: MTD YARD  
Well ID: CR-27C  
Well Type:  Monitoring  Other: \_\_\_\_\_  
Well Finish:  Stick Up  Flush Mount \_\_\_\_\_  
Measuring Pt:  Top of Casing  Other (specify): \_\_\_\_\_  
Total Depth As Constructed (ftbgs): \_\_\_\_\_ Screened Interval (ftbgs): \_\_\_\_\_  
Well Casing: Diameter: 2 Material: PVC  
Well Screen: Diameter: 2

## Deployment

Date and Time of Deployment:	Date: 09/14/15	Time: 13:15
Weather Conditions:		
Depth to groundwater at time of deployment:	21.38	
Total well depth at time of deployment:	2Q 2015	74.52
Dimensions of HydraSleeve™: Length (in.)	60	Diameter (in.) 2
Deployment Method/Position of Weight:	<input checked="" type="checkbox"/> Bottom Anchor: Weight attached to bottom of HydraSleeve™. Weight rests on well bottom. <input type="checkbox"/> Top-Down: Weight attached to bottom of HydraSleeve™. Weight suspended in well. <input type="checkbox"/> Top-Down: Weight attached to top of HydraSleeve™. Weight suspended in well.	
Deployment Depth (Top of HydraSleeve™) (ftbgs):	73.52	

## Retrieval

Date and Time of Retrieval:	Date: 9/14/15	Time: 10:15
Total # of days deployed:	10	
Weather Conditions:	rainy, 60°	
Depth to groundwater at time of retrieval:	21-80	
Total well depth at time of retrieval:	—	
Downhole Field Parameters Upon Retrieval:		
Temp: 15.21 (°C)	ORP: -85 (mV)	Water quality meter: Horiba
pH: 7.46	DO: 15.89 (mg/L)	Serial #: 021832

## Notes/Observations:

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## Field Sampling Technician: Name(s) and Company

WWD

Name

Company

ARCADIS



2820  
24  
2844

## HydraSleeve™ Field Form

Site: 1001868  
Location: MTD YARD  
Well ID: B-9A  
Well Type:  Monitoring  Other:  
Well Finish:  Stick Up  Flush Mount  
Measuring Pt:  Top of Casing  Other (specify): \_\_\_\_\_  
Total Depth As Constructed (ftbgs): Screened Interval (ftbgs):  
Well Casing: Diameter: 2 Material: PVC  
Well Screen: Diameter: 2

### Deployment

Date and Time of Deployment:	Date: 09/01/15	Time: 13:25
Weather Conditions:	SUNNY 70°	
Depth to groundwater at time of deployment:	15.44	
Total well depth at time of deployment:	2Q 2015	25.05
Dimensions of HydraSleeve™: Length (in.)	60	Diameter (in.) 2
Deployment Method/Position of Weight:	<input type="checkbox"/> Bottom Anchor: Weight attached to bottom of HydraSleeve™. Weight rests on well bottom. <input type="checkbox"/> Top-Down: Weight attached to bottom of HydraSleeve™. Weight suspended in well. <input type="checkbox"/> Top-Down: Weight attached to top of HydraSleeve™. Weight suspended in well.	
Deployment Depth (Top of HydraSleeve™) (ftbgs):	24	

### Retrieval

Date and Time of Retrieval:	Date: 9/14/15	Time: 11:00
Total # of days deployed:	10	
Weather Conditions:	RAINING, 60°F	
Depth to groundwater at time of retrieval:	15.49	
Total well depth at time of retrieval:	—	
Downhole Field Parameters Upon Retrieval:		
Temp: 15.21 (°C)	ORP: -85 (mV)	Water quality meter: Horiba
pH: 7.46	DO: 15.89 (mg/L)	Serial #: 021832

### Notes/Observations:

Field Sampling Technician: Name(s) and Company

Name: HAOIMA

Company: ARCADIS

170 + 21.52

= 191.52



## HydraSleeve™ Field Form

Site: 1001868  
 Location: BEACH  
 Well ID: CR-30A  
 Well Type:  Monitoring  Other:  
 Well Finish:  Stick Up  Flush Mount  
 Measuring Pt:  Top of Casing  Other (specify): \_\_\_\_\_  
 Total Depth As Constructed (ftbgs): \_\_\_\_\_ Screened Interval (ftbgs): \_\_\_\_\_  
 Well Casing: Diameter: 2 Material: PVC  
 Well Screen: Diameter: 2

**Deployment**

Date and Time of Deployment:	Date: 9/10/15	Time: 0945
Weather Conditions:	SUNNY, 70°F	
Depth to groundwater at time of deployment:	14.55	
Total well depth at time of deployment:	2Q 2015	22.52
Dimensions of HydraSleeve™: Length (in.)	60	Diameter (in.) 2
Deployment Method/Position of Weight:	<input checked="" type="checkbox"/> Bottom Anchor: Weight attached to bottom of HydraSleeve™. Weight rests on well bottom. <input type="checkbox"/> Top-Down: Weight attached to bottom of HydraSleeve™. Weight suspended in well. <input type="checkbox"/> Top-Down: Weight attached to top of HydraSleeve™. Weight suspended in well.	
Deployment Depth (Top of HydraSleeve™) (ftbgs):	21.52	

**Retrieval**

Date and Time of Retrieval:	Date: 9/11/15	Time: 11:10
Total # of days deployed:	1	
Weather Conditions:	SUNNY 85°F	
Depth to groundwater at time of retrieval:	14.54	
Total well depth at time of retrieval:	_____	
Downhole Field Parameters Upon Retrieval:		
Temp: 22.31 (°C)	ORP: -91 (mV)	Water quality meter: HORIBA
pH: 6.57	DO: 12.40 (mg/L)	Serial #: 021832

**Notes/Observations:**

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**Field Sampling Technician: Name(s) and Company**

Name	Company
MA/HO	ARCADIS



## HydraSleeve™ Field Form

Site: 1001868  
Location: BEACH  
Well ID: CR-30B  
Well Type:  Monitoring  Other: \_\_\_\_\_  
Well Finish:  Stick Up  Flush Mount \_\_\_\_\_  
Measuring Pt:  Top of Casing  Other (specify): \_\_\_\_\_  
Total Depth As Constructed (ftbgs): \_\_\_\_\_ Screened Interval (ftbgs): \_\_\_\_\_  
Well Casing: Diameter: 2 Material: PVC  
Well Screen: Diameter: 2

## Deployment

Date and Time of Deployment:	Date: 09/04/15	Time: 15:50
Weather Conditions:		
Depth to groundwater at time of deployment:	17.90	
Total well depth at time of deployment:	2Q 2015	52.79
Dimensions of HydraSleeve™: Length (in.)	60	Diameter (in.) 2
Deployment Method/Position of Weight:	<input checked="" type="checkbox"/> Bottom Anchor: Weight attached to bottom of HydraSleeve™. Weight rests on well bottom. <input type="checkbox"/> Top-Down: Weight attached to bottom of HydraSleeve™. Weight suspended in well. <input type="checkbox"/> Top-Down: Weight attached to top of HydraSleeve™. Weight suspended in well.	
Deployment Depth (Top of HydraSleeve™) (ftbgs):	51.79	

## Retrieval

Date and Time of Retrieval:	Date: 9/10/15	Time: 09:10
Total # of days deployed:	6	
Weather Conditions:	SUNNY 70°F	
Depth to groundwater at time of retrieval:	18.68	
Total well depth at time of retrieval:	—	
Downhole Field Parameters Upon Retrieval:		
Temp: 19.09 (°C)	ORP: -72 (mV)	Water quality meter: HDRI BA
pH: 7.02	DO: 13.97 (mg/L)	Serial #: 021832

## Notes/Observations:

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## Field Sampling Technician: Name(s) and Company

Name: MA/HO Company: ARCADIS

0003

10

19



## HydraSleeve™ Field Form

Site: 1001868  
 Location: BEACH  
 Well ID: CR-33  
 Well Type:  Monitoring  Other:  
 Well Finish:  Stick Up  Flush Mount  
 Measuring Pt:  Top of Casing  Other (specify): \_\_\_\_\_  
 Total Depth As Constructed (ftbgs): \_\_\_\_\_ Screened Interval (ftbgs): \_\_\_\_\_  
 Well Casing: Diameter: 2 Material: PVC  
 Well Screen: Diameter: 2

## Deployment

Date and Time of Deployment:	Date: 07/04/15	Time: 15:30
Weather Conditions:	SUNNY 80	
Depth to groundwater at time of deployment:	6.02	
Total well depth at time of deployment:	2Q 2015	17.88
Dimensions of HydraSleeve™: Length (in.)	60	Diameter (in.) 2
Deployment Method/Position of Weight:	<input checked="" type="checkbox"/> Bottom Anchor: Weight attached to bottom of HydraSleeve™. Weight rests on well bottom. <input type="checkbox"/> Top-Down: Weight attached to bottom of HydraSleeve™. Weight suspended in well. <input type="checkbox"/> Top-Down: Weight attached to top of HydraSleeve™. Weight suspended in well.	
Deployment Depth (Top of HydraSleeve™) (ftbgs):	16.8	

## Retrieval

Date and Time of Retrieval:	Date: 9/16/15	Time: 1345
Total # of days deployed:	6	
Weather Conditions:	SUNNY 80°	
Depth to groundwater at time of retrieval:	9.43	
Total well depth at time of retrieval:	_____	
Downhole Field Parameters Upon Retrieval:		
Temp: 22.19 (°C)	ORP: -124 (mV)	Water quality meter: Horiba
pH: 6.88	DO: 12.36 (mg/L)	Serial #: 021832

## Notes/Observations:

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## Field Sampling Technician: Name(s) and Company

Name HJO

Company

ARCADIS



## HydraSleeve™ Field Form

2905  
61  
2966

Site: 1001868  
Location: BEACH  
Well ID: CR-32C  
Well Type:  Monitoring  Other:  
Well Finish:  Stick Up  Flush Mount  
Measuring Pt:  Top of Casing  Other (specify): \_\_\_\_\_  
Total Depth As Constructed (ftbgs): \_\_\_\_\_ Screened Interval (ftbgs): \_\_\_\_\_  
Well Casing: Diameter: 2 Material: PVC  
Well Screen: Diameter: 2

## Deployment

Date and Time of Deployment:	Date: 09/04/15	Time: 15:00
Weather Conditions:	Sunny 70°	
Depth to groundwater at time of deployment:	10.33	
Total well depth at time of deployment:	2Q 2015	62.66
Dimensions of HydraSleeve™: Length (in.)	60	Diameter (in.) 2
Deployment Method/Position of Weight:	<input checked="" type="checkbox"/> Bottom Anchor: Weight attached to bottom of HydraSleeve™. Weight rests on well bottom. <input type="checkbox"/> Top-Down: Weight attached to bottom of HydraSleeve™. Weight suspended in well. <input type="checkbox"/> Top-Down: Weight attached to top of HydraSleeve™. Weight suspended in well.	
Deployment Depth (Top of HydraSleeve™) (ftbgs):	61.66	

## Retrieval

Date and Time of Retrieval:	Date: 09/10/15	Time: 11:30
Total # of days deployed:		
Weather Conditions:	Sunny 80°	
Depth to groundwater at time of retrieval:	11.23	
Total well depth at time of retrieval:	/	
Downhole Field Parameters Upon Retrieval:		
Temp: 22.59 (°C)	ORP: -169 (mV)	Water quality meter: HORIZA 453
pH: 6.47	DO: 9.28 (mg/L)	Serial #: 21832

## Notes/Observations:

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## Field Sampling Technician: Name(s) and Company

Name  
HO/BPCompany  
ANA



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Duplicate  
Log in TOP

HydraSleeve™ Field Form

Site: 1001868  
Location: MTD YARD  
Well ID: B-19  
Well Type:  Monitoring  Other:  
Well Finish:  Stick Up  Flush Mount  
Measuring Pt:  Top of Casing  Other (specify): \_\_\_\_\_  
Total Depth As Constructed (ftbgs): \_\_\_\_\_ Screened Interval (ftbgs): \_\_\_\_\_  
Well Casing: Diameter: 2 Material: PVC  
Well Screen: Diameter: 2

Deployment

Date and Time of Deployment:	Date: 09/09/15	Time: 14:30
Weather Conditions:	Sunny 70°	
Depth to groundwater at time of deployment:	16.37	
Total well depth at time of deployment:	2Q 2015	30.58
Dimensions of HydraSleeve™: Length (in.)	60	Diameter (in.) 2
Deployment Method/Position of Weight:	<input type="checkbox"/> Bottom Anchor: Weight attached to bottom of HydraSleeve™. Weight rests on well bottom. <input type="checkbox"/> Top-Down: Weight attached to bottom of HydraSleeve™. Weight suspended in well. <input type="checkbox"/> Top-Down: Weight attached to top of HydraSleeve™. Weight suspended in well.	
Deployment Depth (Top of HydraSleeve™) (ftbgs):	29.58	

Retrieval

Date and Time of Retrieval:	Date: 9/14/15	Time: 13:15
Total # of days deployed:	10	
Weather Conditions:	Overcast	60° F
Depth to groundwater at time of retrieval:	16.41	
Total well depth at time of retrieval:		
Downhole Field Parameters Upon Retrieval:		
Temp: 16.42 (°C)	ORP: -81 (mV)	Water quality meter: Horiba
pH: 6.69	DO: 9.44 (mg/L)	Serial #: 021832

Notes/Observations:

Field Sampling Technician: Name(s) and Company

Name

HAO / MA

Company

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## HydraSleeve™ Field Form

Site: 1001868  
Location: MTD YARD  
Well ID: B-21  
Well Type:  Monitoring  Other:  
Well Finish:  Stick Up  Flush Mount  
Measuring Pt:  Top of Casing  Other (specify): \_\_\_\_\_  
Total Depth As Constructed (ftbgs): Screened Interval (ftbgs):  
Well Casing: Diameter: 2 Material: PVC  
Well Screen: Diameter: 2

NOT SAMPLED - MESSED UP  
CASING

## Deployment

Date and Time of Deployment:	Date:	Time:
Weather Conditions:		
Depth to groundwater at time of deployment:		
Total well depth at time of deployment:	2Q 2015	33.53
Dimensions of HydraSleeve™: Length (in.)	60	Diameter (in.) 2
Deployment Method/Position of Weight:	<input type="checkbox"/> Bottom Anchor: Weight attached to bottom of HydraSleeve™. Weight rests on well bottom. <input type="checkbox"/> Top-Down: Weight attached to bottom of HydraSleeve™. Weight suspended in well. <input type="checkbox"/> Top-Down: Weight attached to top of HydraSleeve™. Weight suspended in well.	
Deployment Depth (Top of HydraSleeve™) (ftbgs):	32.53	

## Retrieval

Date and Time of Retrieval:	Date:	Time:
Total # of days deployed:		
Weather Conditions:		
Depth to groundwater at time of retrieval:		
Total well depth at time of retrieval:		
Downhole Field Parameters Upon Retrieval:		
Temp: _____ (°C)	ORP: _____ (mV)	Water quality meter: _____
pH: _____	DO: _____ (mg/L)	Serial #: _____

## Notes/Observations:

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## Field Sampling Technician: Name(s) and Company

Name

Company

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## HydraSleeve™ Field Form

Site: 1001868  
Location: MTD YARD  
Well ID: B-20 (Product in well 2Q2015) NOT SAMPLED

Well Type:  Monitoring  Other: \_\_\_\_\_  
Well Finish:  Stick Up  Flush Mount  
Measuring Pt:  Top of Casing  Other (specify): \_\_\_\_\_  
Total Depth As Constructed (ftbgs): \_\_\_\_\_ Screened Interval (ftbgs): \_\_\_\_\_  
Well Casing: Diameter: 2 Material: PVC  
Well Screen: Diameter: 2

**Deployment**

Date and Time of Deployment:	Date: _____	Time: _____
Weather Conditions:	_____	
Depth to groundwater at time of deployment:	_____	
Total well depth at time of deployment:	_____	
Dimensions of HydraSleeve™: Length (in.)	60	Diameter (in.) 2
Deployment Method/Position of Weight:	<input type="checkbox"/> Bottom Anchor: Weight attached to bottom of HydraSleeve™. Weight rests on well bottom. <input type="checkbox"/> Top-Down: Weight attached to bottom of HydraSleeve™. Weight suspended in well. <input type="checkbox"/> Top-Down: Weight attached to top of HydraSleeve™. Weight suspended in well.	
Deployment Depth (Top of HydraSleeve™) (ftbgs):	_____	

**Retrieval**

Date and Time of Retrieval:	Date: _____	Time: _____
Total # of days deployed:	_____	
Weather Conditions:	_____	
Depth to groundwater at time of retrieval:	_____	
Total well depth at time of retrieval:	_____	
Downhole Field Parameters Upon Retrieval:		
Temp: _____ (°C)	ORP: _____ (mV)	Water quality meter: _____
pH: _____	DO: _____ (mg/L)	Serial #: _____

**Notes/Observations:**

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**Field Sampling Technician: Name(s) and Company**

Name

Company

_____
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## HydraSleeve™ Field Form

**Site:** 1001868  
**Location:** BEACH  
**Well ID:** CR-32B  
**Well Type:**  Monitoring  Other: \_\_\_\_\_  
**Well Finish:**  Stick Up  Flush Mount \_\_\_\_\_  
**Measuring Pt:**  Top of Casing  Other (specify): \_\_\_\_\_  
**Total Depth As Constructed (ftbgs):** \_\_\_\_\_ **Screened Interval (ftbgs):** \_\_\_\_\_  
**Well Casing:** Diameter: 2 Material: PVC  
**Well Screen:** Diameter: 2

### Deployment

Date and Time of Deployment:	Date: 9/4/15	Time: 1515
Weather Conditions:	SUNNY 70°F	
Depth to groundwater at time of deployment:	9.66	
Total well depth at time of deployment:	2Q 2015 46.15	
Dimensions of HydraSleeve™: Length (in.)	60	Diameter (in.) 2
Deployment Method/Position of Weight:	<input type="checkbox"/> Bottom Anchor: Weight attached to bottom of HydraSleeve™. Weight rests on well bottom. <input type="checkbox"/> Top-Down: Weight attached to bottom of HydraSleeve™. Weight suspended in well. <input type="checkbox"/> Top-Down: Weight attached to top of HydraSleeve™. Weight suspended in well.	
Deployment Depth (Top of HydraSleeve™) (ftbgs):	45	

### Retrieval

Date and Time of Retrieval:	Date: 9/10/15	Time: 1100
Total # of days deployed:	6	
Weather Conditions:	SUNNY 70°	
Depth to groundwater at time of retrieval:	12.60	
Total well depth at time of retrieval:	—	
Downhole Field Parameters Upon Retrieval:		
Temp: 72.01 (°C)	ORP: -55 (mV)	Water quality meter: Horiba
pH: 6.61	DO: 9.03 (mg/L)	Serial #: 021832

### Notes/Observations:

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### Field Sampling Technician: Name(s) and Company

Name HAO Company ARCADIS



## HydraSleeve™ Field Form

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Site: 1001868  
Location: BEACH  
Well ID: CR-32A  
Well Type:  Monitoring  Other:  
Well Finish:  Stick Up  Flush Mount  
Measuring Pt:  Top of Casing  Other (specify): \_\_\_\_\_  
Total Depth As Constructed (ftbgs): \_\_\_\_\_ Screened Interval (ftbgs): \_\_\_\_\_  
Well Casing: Diameter: 2 Material: PVC  
Well Screen: Diameter: 2

## Deployment

Date and Time of Deployment:	Date: <u>9/4/15</u>	Time: <u>1525</u>
Weather Conditions:	<u>SUNNY 70° F</u>	
Depth to groundwater at time of deployment:	<u>3.93</u>	
Total well depth at time of deployment:	<u>2Q 2015</u>	<u>13.75</u>
Dimensions of HydraSleeve™: Length (in.)	<u>60</u>	Diameter (in.) <u>2</u>
Deployment Method/Position of Weight:	<input type="checkbox"/> Bottom Anchor: Weight attached to bottom of HydraSleeve™. Weight rests on well bottom. <input type="checkbox"/> Top-Down: Weight attached to bottom of HydraSleeve™. Weight suspended in well. <input type="checkbox"/> Top-Down: Weight attached to top of HydraSleeve™. Weight suspended in well.	
Deployment Depth (Top of HydraSleeve™) (ftbgs):	<u>12.75</u>	

## Retrieval

Date and Time of Retrieval:	Date: <u>9/10/15</u>	Time: <u>1010</u>
Total # of days deployed:	<u>6</u>	
Weather Conditions:	<u>SUNNY 70°</u>	
Depth to groundwater at time of retrieval:	<u>3.95</u>	
Total well depth at time of retrieval:	<u>—</u>	
Downhole Field Parameters Upon Retrieval:		
Temp: <u>22.01</u> (°C)	ORP: <u>-55</u> (mV)	Water quality meter: <u>Hanba</u>
pH: <u>6.61</u>	DO: <u>9.03</u> (mg/L)	Serial #: <u>021832</u>

## Notes/Observations:

## Field Sampling Technician: Name(s) and Company

Name JAO

Company

ARCADIS



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## HydraSleeve™ Field Form

Site: 1001868  
Location: BEACH  
Well ID: CR-1  
Well Type:  Monitoring  Other:  
Well Finish:  Stick Up  Flush Mount  
Measuring Pt:  Top of Casing  Other (specify): \_\_\_\_\_  
Total Depth As Constructed (ftbgs): Screened Interval (ftbgs):  
Well Casing: Diameter: 4 Material: PVC  
Well Screen: Diameter: 4

### Deployment

Date and Time of Deployment:	Date: 09/04/15	Time: 15:40
Weather Conditions:	Sunny 80	
Depth to groundwater at time of deployment:	3.74	
Total well depth at time of deployment:	2Q 2015	20.96
Dimensions of HydraSleeve™: Length (in.)	60	Diameter (in.) 4
Deployment Method/Position of Weight:	<input checked="" type="checkbox"/> Bottom Anchor: Weight attached to bottom of HydraSleeve™. Weight rests on well bottom. <input type="checkbox"/> Top-Down: Weight attached to bottom of HydraSleeve™. Weight suspended in well. <input type="checkbox"/> Top-Down: Weight attached to top of HydraSleeve™. Weight suspended in well.	
Deployment Depth (Top of HydraSleeve™) (ftbgs):	20	

### Retrieval

Date and Time of Retrieval:	Date: 9/11/15	Time: 10:10
Total # of days deployed:	7	
Weather Conditions:	Sunny 75°	
Depth to groundwater at time of retrieval:	4.02	
Total well depth at time of retrieval:	—	
Downhole Field Parameters Upon Retrieval:		
Temp: 22.3 (°C)	ORP: -91 (mV)	Water quality meter: Horiba
pH: 6.57	DO: 12.70 (mg/L)	Serial #: 021832

### Notes/Observations:

Field Sampling Technician: Name(s) and Company

Name HAO

Company

ARCADIS



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## HydraSleeve™ Field Form

Site: 1001868  
Location: BEACH  
Well ID: CR-31B  
Well Type:  Monitoring  Other:  
Well Finish:  Stick Up  Flush Mount  
Measuring Pt:  Top of Casing  Other (specify): \_\_\_\_\_  
Total Depth As Constructed (ftbgs): Screened Interval (ftbgs):  
Well Casing: Diameter: 2 Material: PVC  
Well Screen: Diameter: 2

### Deployment

Date and Time of Deployment:	Date: 09/04/15	Time: 15:50
Weather Conditions:	Sunny 80	
Depth to groundwater at time of deployment:	9.92	
Total well depth at time of deployment:	2Q 2015 45.35	
Dimensions of HydraSleeve™: Length (in.)	60	Diameter (in.) 2
Deployment Method/Position of Weight:	<input checked="" type="checkbox"/> Bottom Anchor: Weight attached to bottom of HydraSleeve™. Weight rests on well bottom. <input type="checkbox"/> Top-Down: Weight attached to bottom of HydraSleeve™. Weight suspended in well. <input type="checkbox"/> Top-Down: Weight attached to top of HydraSleeve™. Weight suspended in well.	
Deployment Depth (Top of HydraSleeve™) (ftbgs):	44	

### Retrieval

Date and Time of Retrieval:	Date: 9/11/15	Time: 9:30
Total # of days deployed:	7	
Weather Conditions:	SUNNY 70°F	
Depth to groundwater at time of retrieval:	10.55	
Total well depth at time of retrieval:	—	
Downhole Field Parameters Upon Retrieval:		
Temp: 22.31 (°C)	ORP: -91 (mV)	Water quality meter: HORIBA
pH: 6.57	DO: 12.70 (mg/L)	Serial #: 021832

### Notes/Observations:

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### Field Sampling Technician: Name(s) and Company

Name	Company
MA/HO	ARCADIS



## HydraSleeve™ Field Form

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Site: 1001868  
Location: BEACH  
Well ID: CR-31A  
Well Type:  Monitoring  Other:  
Well Finish:  Stick Up  Flush Mount  
Measuring Pt:  Top of Casing  Other (specify): \_\_\_\_\_  
Total Depth As Constructed (ftbgs): Screened Interval (ftbgs):  
Well Casing: Diameter: 2 Material: PVC  
Well Screen: Diameter: 2

## Deployment

Date and Time of Deployment:	Date: 09/04/15	Time: 15:45
Weather Conditions:	Sunny 80°	
Depth to groundwater at time of deployment:	3.68	
Total well depth at time of deployment:	2Q 2015	13.14
Dimensions of HydraSleeve™: Length (in.)	60	Diameter (in.) 2
Deployment Method/Position of Weight:	<input checked="" type="checkbox"/> Bottom Anchor: Weight attached to bottom of HydraSleeve™. Weight rests on well bottom. <input type="checkbox"/> Top-Down: Weight attached to bottom of HydraSleeve™. Weight suspended in well. <input type="checkbox"/> Top-Down: Weight attached to top of HydraSleeve™. Weight suspended in well.	
Deployment Depth (Top of HydraSleeve™) (ftbgs):	12	

## Retrieval

Date and Time of Retrieval:	Date: 9/11/15	Time: 0850
Total # of days deployed:	7	
Weather Conditions:	Sunny 70°	
Depth to groundwater at time of retrieval:	3.71	
Total well depth at time of retrieval:	—	
Downhole Field Parameters Upon Retrieval:		
Temp: 22.31 (°C)	ORP: -91 (mV)	Water quality meter: Horiba
pH: 6.57	DO: 12.70 (mg/L)	Serial #: 021832

## Notes/Observations:

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## Field Sampling Technician: Name(s) and Company

Name HAU

Company AREADIS

**ANTEA GROUP**  
**FIELD RECORD OF WELL PURGING AND SAMPLING**

Date: 8/19/15	Facility: Kinder Morgan Willbridge	Well ID.: MW 8					
Sample Time: 0950	Location: Kinder Morgan Willbridge						
Weather Conditions: Wind: <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Overcast <input type="checkbox"/> Raining	Temp (°F): 20 30 40 50 60 <input checked="" type="checkbox"/> 70 <input type="checkbox"/> 80 <input type="checkbox"/> 90						
Depth to Water Prior to Purging (DTW): 9.19							
Total Depth of Well (TD): 15.00							
Feet of Water in Well Casing (TD-DTW): 5.81							
2 inch casing = 0.167 gal/ft	<input checked="" type="checkbox"/> 4 inch casing = 0.652 gal/ft						
6 inch casing = 1.469 gal/ft	8 inch casing = 2.611 gal/ft						
Volume of Water in Well Casing: 3.78	Purging Method: P-Pump						
Target Purge Volume (3 Casing Volumes) : NA - Low Flow	Total Actual Purge Volume: ~ 1 gal						
FIELD PARAMETERS							
Time	Depth to Water (feet)	Temp (°C)	Specific Conductivity (µS/cm)	pH	DO (mg/L)	ORP	Comments
927	9.19	18.55	154	6.41	9.40 ↓	-61.4	Light Brown / Orange
930	9.40	18.31	151	6.22	2.93	-48.4	clear
933	9.51	18.65	158	6.03	1.55	-33.8	11
936	9.58	18.50	148	5.67	0.96	-13.1	4
939	9.65	18.60	149	5.62	0.87	-9.6	11
942	9.69	18.57	148	5.58	0.86	-9.4	11
945	9.72	18.57	149	5.57	0.85	-9.2	11
Analysis	Method	Container	COMMENTS				
BTEX	8021-B	(2) 40mL VOA-HCl	YSI 53°C				
PAHs	8270M-SIM	(2) 1L unpres. Amber					
Metals+ Cu,Zn	RCRA 8	500 mL Poly-Nitric					
TPH-Dx	RCRA 8	(2) 40mL VOA-HCl					
TPH-Gx	NW	(2) 40mL VOA-HCl					
Low Level Hg	1631	500 mL Poly-HCl					
DUPLICATE SAMPLE			Field Technician/Sampler:				
Y	or	N	BRL / NW 17				

Antea Group

**ANTEA GROUP**  
**FIELD RECORD OF WELL PURGING AND SAMPLING**

Date: 8/19/15	Facility: Kinder Morgan Willbridge	Well I.D.: MW 25					
Sample Time: 8:25	Location: Kinder Morgan Willbridge						
Weather Conditions: Wind: <input checked="" type="checkbox"/> Clear <input type="checkbox"/> Overcast <input type="checkbox"/> Raining	Temp (°F): 20 30 40 50 60 <input checked="" type="checkbox"/> 70 80 90						
Depth to Water Prior to Purging (DTW): 12.18							
Total Depth of Well (TD): 15.60							
Feet of Water in Well Casing (TD-DTW): 3.42							
2 inch casing = 0.167 gal/ft		✓ 4 inch casing = 0.652 gal/ft					
6 inch casing = 1.469 gal/ft		8 inch casing = 2.611 gal/ft					
Volume of Water in Well Casing: 2.23		Purging Method: P-Pump					
Target Purge Volume (3 Casing Volumes) : NA - Low Flow		Total Actual Purge Volume: ~ 1.0 gal					
FIELD PARAMETERS							
Time	Depth to Water (feet)	Temp (°C)	Specific Conductivity (µS/cm)	pH (SU)	DO (mg/L)	ORP	Comments
818	12.18	17.26	450	6.45	11.15	-123.3	Orange / Brown
821	12.26	17.24	446	6.68	1.01	-142.8	clear
824	12.35	17.24	438	6.73	0.69	-149.6	"
827	12.38	17.24	409	6.65	0.96	-148.2	"
830	12.42	17.41	401	6.60	0.52	-145.0	"
833	12.48	17.46	400	6.63	0.51	-146.2	"
836	12.50	17.48	398	6.64	0.50	-148.3	"
Analysis	Method	Container	COMMENTS				
BTEX	8021-B	(2) 40mL VOA-HCl	XSI 556				
PAHs	8270M-SIM	(2) 1L unpres. Amber					
Metals+ Cu,Zn	RCRA 8	500 mL Poly-Nitric					
TPH-Dx	RCRA 8	(2) 40mL VOA-HCl					
TPH-Ox	NW	(2) 40mL VOA-HCl					
Low Level Hg	1631	500 mL Poly-HCl					
DUPLICATE SAMPLE							
Y	or	N					
Field Technician/Sampler: BNL/nwt							

Antea Group

**ANTEA GROUP**  
**FIELD RECORD OF WELL PURGING AND SAMPLING**

Date: 8/19/15	Facility: Kinder Morgan Willbridge	Well I.D.: MW 26					
Sample Time: 8:10	Location: Kinder Morgan Willbridge						
Weather Conditions: Wind: <input checked="" type="radio"/> Clear	Overcast	Raining					
Temp (°F): 20 30 40 <input checked="" type="radio"/> 50 <input checked="" type="radio"/> 60 70 80 90							
Depth to Water Prior to Purging (DTW): 12.46							
Total Depth of Well (TD): 16.40							
Feet of Water in Well Casing (TD-DTW): 3.94							
2 inch casing = 0.167 gal/ft		✓ 4 inch casing = 0.652 gal/ft					
6 inch casing = 1.469 gal/ft		8 inch casing = 2.611 gal/ft					
Volume of Water in Well Casing: 2.56	Purging Method: Pump						
Target Purge Volume (3 Casing Volumes) : NA - Low Flow		Total Actual Purge Volume: ~164L					
FIELD PARAMETERS							
Time	Depth to Water (feet)	Temp (°C)	Specific Conductivity (vs 1cm)	pH	DO (mg/L)	ORP	Comments
746	12.46	17.02	484	6.16	4.29	-71.2	some brown sediment
750	12.55	16.99	464	6.29	0.84	-106.1	clear
753	12.63	16.82	444	6.38	0.72	-118.8	"
756	12.65	16.79	413	6.43	0.61	-128.1	"
759	12.66	16.73	402	6.47	0.58	-131.3	"
802	12.66	16.72	399	6.49	0.56	-134.9	"
805	12.66	16.72	398	6.49	0.55	-135.2	"
Analysis	Method	Container	Comments				
BTEX	8021-B	(2) 40mL VOA-HCl	VSI 330				
PAHs	8270M-SIM	(2) 1L unpres. Amber					
Metals+ Cu,Zn	RCRA 8 NW	500 mL Poly-Nitric					
TPH-Dx	RCRA 8	(2) 40mL VOA-HCl					
TPH-Gx	NW	(2) 40mL VOA-HCl					
Low Level Hg	1631	500 mL Poly-HCl					
DUPLICATE SAMPLE			Field Technician/Sampler:				
Y	or	N	BNC/Han				

Antea Group

**ANTEA GROUP**  
**FIELD RECORD OF WELL PURGING AND SAMPLING**

Date: <u>8-19-15</u>	Facility: Kinder Morgan Willbridge	Well I.D.: MW-33					
Sample Time: <u>12:15</u>	Location: Kinder Morgan Willbridge						
Weather Conditions: Wind: <u>Clear</u>	Overcast	Raining					
Depth to Water Prior to Purging (DTW): <u>20.54</u>	Temp (°F): 20 30 40 50 60 70 80 <u>60</u>						
Total Depth of Well (TD): <u>26.1</u>							
Feet of Water in Well Casing (TD-DTW): <u>5.4'</u>							
2 inch casing = 0.167 gal/ft		✓ 4 inch casing = 0.652 gal/ft					
6 inch casing = 1.469 gal/ft		8 inch casing = 2.611 gal/ft					
Volume of Water in Well Casing: <u>3.5</u>	Purging Method: <u>P-Pump</u>						
Target Purge Volume (3 Casing Volumes) : NA - Low Flow	Total Actual Purge Volume: <u>≈ 1 gal</u>						
FIELD PARAMETERS							
Time	Depth to Water (feet)	Temp (°C)	Specific Conductivity (µS/cm)	pH	DO (mg/L)	ORP	Comments
1150	20.54	20.79	300	6.40	2.36	-27.7	orange
1153	20.62	20.23	307	6.36	0.87	-22.9	orange clear
1156	20.65	19.24	322	6.16	0.60	-21.5	11
1159	20.66	19.40	328	6.11	0.50	-20.9	11
1202	20.67	19.45	329	6.10	0.48	-19.9	11
1205	20.68	19.50	329	6.09	0.47	-19.7	11
Analysis	Method	Container	COMMENTS				
BTEX	8021-B	(2) 40mL VOA-HCl	<u>XSI S36</u>				
PAHs	8270M-SIM	(2) 1L unpres. Amber					
Metals+ Cu,Zn	RCRA 8	500 mL Poly-Nitric					
TPH-Dx	NW	(2) 40mL VOA-HCl					
TPH-Gx	NW	(2) 40mL VOA-HCl					
Low Level Hg	1631	500 mL Poly-HCl					
DUPLICATE SAMPLE			Field Technician/Sampler:				
Y	or	N	<u>BNL/RW/B</u>				

Antea Group

**ANTEA GROUP**  
**FIELD RECORD OF WELL PURGING AND SAMPLING**

Date: 8/19/15	Facility: Kinder Morgan Willbridge	Well I.D.: MW 34					
Sample Time: 1145	Location: Kinder Morgan Willbridge						
Weather Conditions: Wind: (Clear)	Overcast	Raining					
Temp (°F): 20 30 40 50 60 70 (80) 90							
Depth to Water Prior to Purging (DTW): 19.99							
Total Depth of Well (TD): 24.95							
Feet of Water in Well Casing (TD-DTW): 4.96							
2 inch casing = 0.167 gal/ft		✓ 4 inch casing = 0.652 gal/ft					
6 inch casing = 1.469 gal/ft		8 inch casing = 2.611 gal/ft					
Volume of Water in Well Casing: 3.23		Purging Method: P-pump					
Target Purge Volume (3 Casing Volumes): NA - Low Flow		Total Actual Purge Volume: ~ 1 gal					
FIELD PARAMETERS							
Time	Depth to Water (feet)	Temp (°C)	Specific Conductivity (µS/cm)	pH (SU)	DO (mg/L)	ORP	Comments
1120	20.10	19.43	391	6.47	8.75	-73.9	clear
1123	20.12	17.69	390	6.50	1.18	-70.0	"
1126	20.12	17.55	391	6.31	0.80	-56.2	"
1127	20.12	17.26	391	6.29	0.65	-53.7	"
1132	20.12	17.30	391	6.30	0.63	-54.6	"
1135	20.12	17.32	391	6.30	0.62	-53.9	"
Analysis	Method	Container	COMMENTS				
BTEX	8021-B	(2) 40mL VOA-HCl	YSI 556				
PAHs	8270M-SIM	(2) 1L unpres. Amber					
Metals+ Cu,Zn	RCRA 8	500 mL Poly-Nitric					
TPH-Dx	RCRA 8	(2) 40mL VOA-HCl					
TPH-Gx	NW	(2) 40mL VOA-HCl					
Low Level Hg	1631	500 mL Poly-HCl					
DUPLICATE SAMPLE							Field Technician/Sampler:
Y	or	(N)					BAC/MW H

Antea Group

**ANTEA GROUP**  
**FIELD RECORD OF WELL PURGING AND SAMPLING**

Date: 8/19	Facility: Kinder Morgan Willbridge	Well I.D.: New 36					
Sample Time: 1320	Location: Kinder Morgan Willbridge						
Weather Conditions: Wind: Clear	Overcast	Raining					
		Temp (°F): 20 30 40 50 60 70 80 90					
Depth to Water Prior to Purging (DTW): 15.08							
Total Depth of Well (TD): 28.4							
Feet of Water in Well Casing (TD-DTW): 13.32							
2 inch casing = 0.167 gal/ft		4 inch casing = 0.652 gal/ft					
6 inch casing = 1.469 gal/ft		8 inch casing = 2.611 gal/ft					
Volume of Water in Well Casing: 8.6		Purging Method: P-Pump					
Target Purge Volume (3 Casing Volumes) : NA - Low Flow		Total Actual Purge Volume: 36.1 gal					
FIELD PARAMETERS							
Time	Depth to Water (feet)	Temp (°C)	Specific Conductivity (µS/cm)	pH (SU)	DO (mg/L)	ORP	Comments
1255	15.08	19.31	398	6.63	7.37	-101.6	clear
1258	15.37	18.24	403	6.65	0.48	-100.9	ii
1301	15.51	18.14	404	6.60	0.37	-100.4	ii
1304	15.60	18.27	404	6.54	0.33	-98.0	ii
1307	15.63	18.20	404	6.52	0.31	-97.6	ii
1310	15.65	18.32	404	6.51	0.30	-97.0	ii
Analysis	Method	Container	COMMENTS				
BTEX	8021-B	(2) 40mL VOA-HCl	YSI 556				
PAHs	8270M-SIM	(2) 1L unpres. Amber					
Metals+ Cu,Zn	RCRA 8	500 mL Poly-Nitric					
TPH-Dx	NW	(2) 40mL VOA-HCl					
TPH-Gx	NW	(2) 40mL VOA-HCl					
Low Level Hg	1631	500 mL Poly-HCl					
DUPLICATE SAMPLE						Field Technician/Sampler:	
Y	or	N				BUL/NW/H	

Antea Group

**ANTEA GROUP**  
**FIELD RECORD OF WELL PURGING AND SAMPLING**

Date: 8/19/15	Facility:	Kinder Morgan Willbridge	Well I.D.:	MW - 37			
Sample Time:	10:40	Location: Kinder Morgan Willbridge					
Weather Conditions:	Wind: (Clear)	Overcast	Raining	Temp (°F): 20 30 40 50 60 70 (80) 90			
Depth to Water Prior to Purging (DTW): 15.77							
Total Depth of Well (TD): 28.50							
Feet of Water in Well Casing (TD-DTW): 12.73							
2 inch casing = 0.167 gal/ft		✓ 4 inch casing = 0.652 gal/ft					
6 inch casing = 1.469 gal/ft		8 inch casing = 2.611 gal/ft					
Volume of Water in Well Casing: 8.29		Purging Method: P-Pump					
Target Purge Volume (3 Casing Volumes): NA - Low Flow		Total Actual Purge Volume: ~ 1 gal					
FIELD PARAMETERS							
Time	Depth to Water (feet)	Temp (°C)	Specific Conductivity (<math>\mu</math>S/cm)	pH	DO (SU)	ORP (mg/L)	Comments
1005	15.77	17.43	361	6.43	10.03	-27.8	clear
1008	16.05	18.45	393	6.24	0.98	-45.6	ii
1011	16.17	18.62	391	6.14	0.85	-48.6	ii
1014	16.23	18.42	393	6.17	0.74	-58.7	ii
1017	16.25	18.47	394	6.23	0.65	-68.1	ii
1020	16.26	18.46	393	6.26	0.63	-69.7	ii
1023	16.27	18.47	393	6.27	0.61	-70.6	ii
Analysis	Method	Container	COMMENTS				
BTEX	8021-B	(2) 40mL VOA-HCl	YSI 556				
PAHs	8270M-SIM	(2) 1L unpres. Amber					
Metals+ Cu,Zn	RCRA 8	500 mL Poly-Nitric	Sample "DUL"				
TPH-Dx	RCRA 8	(2) 40mL VOA-HCl					
TPH-Gx	NW	(2) 40mL VOA-HCl					
Low Level Hg	1631	500 mL Poly-HCl					
DUPLICATE SAMPLE						Field Technician/Sampler:	
Y	or	N				Bret/NW/H	

Antea Group

**ANTEA GROUP**  
**FIELD RECORD OF WELL PURGING AND SAMPLING**

Date: 8/17	Facility: Kinder Morgan Willbridge	Well I.D.: MW 40					
Sample Time: 1245	Location: Kinder Morgan Willbridge						
Weather Conditions: Wind: Clear	Overcast	Raining					
Temp (°F): 20 30 40 50 60 70 80 90							
Depth to Water Prior to Purging (DTW): 14.81							
Total Depth of Well (TD): 19.00							
Feet of Water in Well Casing (TD-DTW): 4.19							
2 inch casing = 0.167 gal/ft	<input checked="" type="checkbox"/> 4 inch casing = 0.652 gal/ft						
6 inch casing = 1.469 gal/ft	8 inch casing = 2.611 gal/ft						
Volume of Water in Well Casing: 2.73	Purging Method: P-Pump						
Target Purge Volume (3 Casing Volumes) : NA - Low Flow	Total Actual Purge Volume: Low Flow						
FIELD PARAMETERS							
Time	Depth to Water (feet)	Temp (°C)	Specific Conductivity (µS/cm)	pH	DO (mg/L)	ORP	Comments
1220	14.81	20.63	382	6.44	0.68	-73.4	clear
1223	14.85	17.85	432	6.25	0.37	-69.7	u
1226	14.85	17.34	438	6.21	0.33	-73.0	u
1229	14.85	17.27	737	6.23	0.31	-76.7	u
1232	14.85	17.30	436	6.24	0.32	-79.8	cc
Analysis	Method	Container	COMMENTS				
BTEX	8021-B	(2) 40mL VOA-HCl	YSI 536				
PAHs	8270M-SIM	(2) 1L unpres. Amber					
Metals+ Cu,Zn	RCRA 8	500 mL Poly-Nitric					
TPH-Dx	RCRA 8	(2) 40mL VOA-HCl					
TPH-Gx	NW	(2) 40mL VOA-HCl					
Low Level Hg	1631	500 mL Poly-HCl					
DUPLICATE SAMPLE							Field Technician/Sampler:
Y	or	N					BRE/NCH

Antea Group

Kinder Morgan- Orange, CA  1100 Town and Country Rd Orange, CA 92868			Billing Information:  Accounts Payable 1100 Town and Country Rd Orange, CA 92868				Analysis / Container / Preservative				Chain of Custody   L.A.B. S.C.I.E.N.C.E.S.  12065 Lebanon Rd Mount Juliet, TN 37122 Phone: 615-758-5858 Phone: 800-767-5859 Fax: 615-758-5859	Page _____ of _____	
Report to: Nolan Lewis and Rob Truedinger			Email To: nolan.lewis@anteagroup.com; robert_truedinger@kindermorgan.com;								L# _____		
Project <u>KMWB-GWM</u> Description:			City/State <u>Portland</u> Collected: <u>Oregon</u>								Table # _____		
Phone: 415-335-8280 Fax:	Client Project # <u>KMWB1401</u>		Lab Project # <b>KINMOROCA-ANTEALL</b>						Acctnum: <b>KINMOROCA</b>		Template: <b>T103546</b>		
Collected by (print): <u>Nolan Lewis</u>	Site/Facility ID #		P.O. #		Date Results Needed				Prelogin: <b>P520574</b>		TSR: <b>358 - Jarred Willis</b>		
Collected by (signature): <u>Nolan Lewis</u>	Rush? (Lab MUST Be Notified)				Email? <u>No</u> <input checked="" type="checkbox"/> Yes	No. of Cntrs	NWTPHdx 100ml Amb HCl				Shipped Via: <b>FEDEX Ground</b>		PB: _____
Immediately Packed on Ice N <u>Y</u> ✓	<u>Same Day</u> ..... 200% <u>Next Day</u> ..... 100% <u>Two Day</u> ..... 50% <u>Three Day</u> ..... 25%				FAX? <u>No</u> <input checked="" type="checkbox"/> Yes		BTEXM 8260 low level 40ml Amb-HCl-BLK						Rem./Contaminant _____
Sample ID	Comp/Grab	Matrix *	Depth	Date	Time		BTEXM 8260 low level 40ml Amb HCl	HG1631250ml Clr-HCl	NWTPHdx 40ml Amb HCl	PAHS 8270D-SIM 40ml Amb-NoPres-WT	RCRA8+ Cu Mn Zn 6020 500ml HDP-E HNO3		
MW 8	G	GW	N4	8/19/15	0950	11	X		X X X X				
MW 25	↑	GW	↑	↑	0845	11	X		X X X X				
MW 26	↓	GW	↓		0810	11	X		X X X X				
MW 33	↓	GW	↓		1215	11	X		X X X X				
MW 34	↓	GW	↓		1145	11	X		X X X X				
MW 36	↓	GW	↓		1320	11	X		X X X X				
MW 37	↓	GW	↓		1040	11	X		X X X X				
MW 40	↓	GW	↓	↓	1245	11	X		X X X X				
DUP	G	GW	↓	8/19/15	—	11	X		X X X X				
TRIP BLANK	NA	GW	NA	—	—	1	X						
* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other													
Remarks: Kinder Morgan - Willbridge Terminal Use Portland Harbor Low Level Detector Limits Add 1-methylnaphthalene and 2-methylnaphthalene to PAH's													
Relinquished by : (Signature) <u>Nolan Lewis</u>	Date: 8/20/15	Time: 0905	Received by: (Signature)				Samples returned via: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/>				Condition: <input type="checkbox"/> (lab use only)		
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)				Temp: °C Bottles Received:				Flow <input type="checkbox"/> Other <input type="checkbox"/> Hold # <input type="checkbox"/>		
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)				Date:		Time:		pH Checked: <input type="checkbox"/> NCF: <input type="checkbox"/>	COC Seal Intact: <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA	

Kinder Morgan- Orange, CA 1100 Town and Country Rd Orange, CA 92868			Billing Information:  Accounts Payable 1100 Town and Country Rd Orange, CA 92868			Analysis / Container / Preservative			Chain of Custody  L-A-B S-C-I-E-N-C-E-S 12065 Lebanon Rd Mount Juliet, TN 37122 Phone: 615-758-5858 Phone: 800-767-5859 Fax: 615-758-5859  L# Table# Acctnum: KINMOROCA Template: T103546 Prelogin: P520574 TSR: 358 - Jarred Willis PB: Shipped Via: FedEx Ground Rem./Contaminant      Sample # (lab only)			
Report to: Nolan Lewis and Rob Truedinger			Email To: nolan.lewis@anteagroup.com; robert_truedinger@kindermorgan.com;									
Project <i>KMwB</i> GW			City/State Collected: <i>Portland, OR</i>									
Description:												
Phone: 415-335-8280 Fax:	Client Project # <i>KMwB 2401</i>		Lab Project # <b>KINMOROCA-ANTEALL</b>									
Collected by (print): <i>Nolan Lewis</i>	Site/Facility ID #		P.O. #									
Collected by (signature): <i>Nolan Lewis</i>	Rush? (Lab MUST Be Notified)  Same Day ..... 200% Next Day ..... 100% Two Day ..... 50% Three Day ..... 25%		Date Results Needed  Email? No <input checked="" type="checkbox"/> Yes FAX? No <input type="checkbox"/> Yes		No. of Cntrs							
Packed on Ice N <input type="checkbox"/> Y <input checked="" type="checkbox"/>	Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	BTEXM 8260 low level 40ml Amb-HCl	BTEXM 8260 low level 40ml Amb-HCl-Blk	HG1631250ml Cr-HCl	NWTPHDX 100ml Amb-HCl	PAHS 8270D-SIM 40ml Amb-NoPres-WT	RCRAS+Cu Mn Zn 6020 500ml HDPE HNO3
					<i>8/19/15</i>	<i>11</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
MW 33		<i>G</i>	<b>GW</b>	<i>NA</i>	<i>8/19/15</i>	<i>1215</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
MW 34		<i>↑</i>	<b>GW</b>	<i>↑</i>	<i>1145</i>	<i>1</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
MW 36		<i>↓</i>	<b>GW</b>		<i>1330</i>	<i>scratches</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
MW 37		<i>↓</i>	<b>GW</b>		<i>1015</i>	<i>scratches</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
MW 40		<i>↓</i>	<b>GW</b>	<i>↓</i>	<i>8/19/15</i>	<i>scratches</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
DUP		<i>G</i>	<b>GW</b>	<i>NA</i>	<i>8/19/15</i>	<i>—</i>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
* Matrix: SS - Soil GW - Groundwater WW - WasteWater DW - Drinking Water OT - Other _____												
Remarks: Kinder Morgan - Willbridge Terminal  <i>Use Portland Harbor Low Level Detection Limits</i>												
Relinquished by: (Signature) <i>Nolan Lewis</i>	Date: <i>8/20/15</i>	Time: <i>900</i>	Received by: (Signature)			Samples returned via: <input type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Courier <input type="checkbox"/>			Condition: (lab use only)			
Relinquished by: (Signature)	Date:	Time:	Received by: (Signature)			Temp: °C	Bottles Received:	Hold #:				
Relinquished by: (Signature)	Date:	Time:	Received for lab by: (Signature)			Date:	Time:	pH Checked: <input type="checkbox"/> NCF: <input type="checkbox"/>				
COC Seal Intact: <input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> NA												



## HydraSleeve™ Field Form

Site: 354972  
Location: BEACH  
Well ID: U-23  
Well Type:  Monitoring  Other:  
Well Finish:  Stick Up  Flush Mount  
Measuring Pt:  Top of Casing  Other (specify): \_\_\_\_\_  
Total Depth As Constructed (ftbgs): Screened Interval (ftbgs):  
Well Casing: Diameter: 2 Material: PVC  
Well Screen: Diameter: 2

## Deployment

Date and Time of Deployment:	Date: 09/14/15	Time: 11:50
Weather Conditions:	Cloudy, 60° Rain	
Depth to groundwater at time of deployment:	41.15	
Total well depth at time of deployment:	2Q 2015	19.2
Dimensions of HydraSleeve™: Length (in.)	60	Diameter (in.) 2
Deployment Method/Position of Weight:	<input checked="" type="checkbox"/> Bottom Anchor: Weight attached to bottom of HydraSleeve™. Weight rests on well bottom. <input type="checkbox"/> Top-Down: Weight attached to bottom of HydraSleeve™. Weight suspended in well. <input type="checkbox"/> Top-Down: Weight attached to top of HydraSleeve™. Weight suspended in well.	
Deployment Depth (Top of HydraSleeve™) (ftbgs):	18.2	

## Retrieval

Date and Time of Retrieval:	Date: 9/15/15	Time: 14:00
Total # of days deployed:	1	
Weather Conditions:	Partly sunny, 60°F	
Depth to groundwater at time of retrieval:	41.19	
Total well depth at time of retrieval:	15	
Downhole Field Parameters Upon Retrieval:		
Temp: 18.45 (°C)	ORP: 700 (mV)	Water quality meter: HORIBA
pH: 6.50	DO: 7.49 (mg/L)	Serial #: 021832

## Notes/Observations:

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## Field Sampling Technician: Name(s) and Company

Name	Company
MA/HO	ARCADIS



## HydraSleeve™ Field Form

Site: 354972  
Location: BEACH  
Well ID: U-22A  
Well Type:  Monitoring  Other:  
Well Finish:  Stick Up  Flush Mount  
Measuring Pt:  Top of Casing  Other (specify): \_\_\_\_\_  
Total Depth As Constructed (ftbgs): Screened Interval (ftbgs):  
Well Casing: Diameter: 2 Material: PVC  
Well Screen: Diameter: 2

## Deployment

Date and Time of Deployment:	Date: 09/15/15	Time: 12:00
Weather Conditions:	Cloudy, Rain, 60°	
Depth to groundwater at time of deployment:	9.80	
Total well depth at time of deployment:	2Q 2015	22.87
Dimensions of HydraSleeve™: Length (in.)	60	Diameter (in.) 2
Deployment Method/Position of Weight:	<input checked="" type="checkbox"/> Bottom Anchor: Weight attached to bottom of HydraSleeve™. Weight rests on well bottom. <input type="checkbox"/> Top-Down: Weight attached to bottom of HydraSleeve™. Weight suspended in well. <input type="checkbox"/> Top-Down: Weight attached to top of HydraSleeve™. Weight suspended in well.	
Deployment Depth (Top of HydraSleeve™) (ftbgs):	21.87	

## Retrieval

Date and Time of Retrieval:	Date: 9/15/15	Time: 12:30
Total # of days deployed:	1	
Weather Conditions:	Partly Sunny, 60°F	
Depth to groundwater at time of retrieval:	9.88	
Total well depth at time of retrieval:	—	
Downhole Field Parameters Upon Retrieval:		
Temp: 17.67 (°C)	ORP: 13.00 (mV)	Water quality meter: HORIBA
pH: 6.52	DO: 15.59 (mg/L)	Serial #: _____

## Notes/Observations:

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## Field Sampling Technician: Name(s) and Company

Name	Company
MA/HO	ARCADIS



## HydraSleeve™ Field Form

Site: 354972  
Location: BEACH  
Well ID: U-22B  
Well Type:  Monitoring  Other:  
Well Finish:  Stick Up  Flush Mount  
Measuring Pt:  Top of Casing  Other (specify): \_\_\_\_\_  
Total Depth As Constructed (ftbgs): \_\_\_\_\_ Screened Interval (ftbgs): \_\_\_\_\_  
Well Casing: Diameter: 2 Material: PVC  
Well Screen: Diameter: 2

*DUPPLICATE  
LOOP IN TOP*

## Deployment

Date and Time of Deployment:	Date: 09/15/15	Time: 12:10
Weather Conditions:	Cloudy, RAIN 60°	
Depth to groundwater at time of deployment:	7.15	
Total well depth at time of deployment:	2Q 2015	32.39
Dimensions of HydraSleeve™: Length (in.)	60	Diameter (in.) 2
Deployment Method/Position of Weight:	<input checked="" type="checkbox"/> Bottom Anchor: Weight attached to bottom of HydraSleeve™. Weight rests on well bottom. <input type="checkbox"/> Top-Down: Weight attached to bottom of HydraSleeve™. Weight suspended in well. <input type="checkbox"/> Top-Down: Weight attached to top of HydraSleeve™. Weight suspended in well.	
Deployment Depth (Top of HydraSleeve™) (ftbgs):	31.39	

## Retrieval

Date and Time of Retrieval:	Date: 09/15/15	Time: 13:00
Total # of days deployed:	_____	
Weather Conditions:	overcast 65°	
Depth to groundwater at time of retrieval:	17.97	
Total well depth at time of retrieval:	—	
Downhole Field Parameters Upon Retrieval:		
Temp: 18.64 (°C)	ORP: -83 (mV)	Water quality meter: Horiba
pH: 6.94	DO: 7.99 (mg/L)	Serial #: 21832

## Notes/Observations:

## Field Sampling Technician: Name(s) and Company

Name MA

Company

ARCADIS



## HydraSleeve™ Field Form

Site: 354972  
Location: BEACH  
Well ID: U-24A  
Well Type:  Monitoring  Other:  
Well Finish:  Stick Up  Flush Mount  
Measuring Pt:  Top of Casing  Other (specify): \_\_\_\_\_  
Total Depth As Constructed (ftbgs): \_\_\_\_\_ Screened Interval (ftbgs): \_\_\_\_\_  
Well Casing: Diameter: 2 Material: PVC  
Well Screen: Diameter: 2

## Deployment

Date and Time of Deployment:	Date: 09/14/15	Time: 12:15
Weather Conditions:	Cloudy 60° Rain	
Depth to groundwater at time of deployment:	9.13	
Total well depth at time of deployment:	2Q 2015	23.22
Dimensions of HydraSleeve™: Length (in.)	60	Diameter (in.) 2
Deployment Method/Position of Weight:	<input checked="" type="checkbox"/> Bottom Anchor: Weight attached to bottom of HydraSleeve™. Weight rests on well bottom. <input type="checkbox"/> Top-Down: Weight attached to bottom of HydraSleeve™. Weight suspended in well. <input type="checkbox"/> Top-Down: Weight attached to top of HydraSleeve™. Weight suspended in well.	
Deployment Depth (Top of HydraSleeve™) (ftbgs):	22.22	

## Retrieval

Date and Time of Retrieval:	Date: 9/16/15	Time: 8:20
Total # of days deployed:	2	
Weather Conditions:	Cloudy, 60°F	
Depth to groundwater at time of retrieval:	9.79	
Total well depth at time of retrieval:	_____	
Downhole Field Parameters Upon Retrieval:		
Temp: 16.69 (°C)	ORP: 3 (mV)	Water quality meter: HORIBA
pH: 6.16	DO: 10.01 (mg/L)	Serial #: 021832

## Notes/Observations:

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## Field Sampling Technician: Name(s) and Company

Name: MA/HO Company: ARCADIS



## HydraSleeve™ Field Form

Site: 354972  
Location: BEACH  
Well ID: U-24B  
Well Type:  Monitoring  Other:  
Well Finish:  Stick Up  Flush Mount  
Measuring Pt:  Top of Casing  Other (specify): \_\_\_\_\_  
Total Depth As Constructed (ftbgs): \_\_\_\_\_ Screened Interval (ftbgs): \_\_\_\_\_  
Well Casing: Diameter: 2 Material: PVC  
Well Screen: Diameter: 2

## Deployment

Date and Time of Deployment:	Date: 09/15/15	Time: 12:20
Weather Conditions:	Cloudy (0%) RAIN	
Depth to groundwater at time of deployment:	8.65	
Total well depth at time of deployment:	2Q 2015	33.79
Dimensions of HydraSleeve™: Length (in.)	60	Diameter (in.) 2
Deployment Method/Position of Weight:	<input checked="" type="checkbox"/> Bottom Anchor: Weight attached to bottom of HydraSleeve™. Weight rests on well bottom. <input type="checkbox"/> Top-Down: Weight attached to bottom of HydraSleeve™. Weight suspended in well. <input type="checkbox"/> Top-Down: Weight attached to top of HydraSleeve™. Weight suspended in well.	
Deployment Depth (Top of HydraSleeve™) (ftbgs):	32.79	

## Retrieval

Date and Time of Retrieval:	Date: 9/16/15	Time: 8:45
Total # of days deployed:	2	
Weather Conditions:	PARTLY SUNNY, 60°F	
Depth to groundwater at time of retrieval:	14.20	
Total well depth at time of retrieval:	—	
Downhole Field Parameters Upon Retrieval:		
Temp: 16.01 (°C)	ORP: -63 (mV)	Water quality meter: HORIBA.
pH: 6.74	DO: 10.06 (mg/L)	Serial #: 021832

## Notes/Observations:

## Field Sampling Technician: Name(s) and Company

Name: MA/HO Company: ARCADIS



## HydraSleeve™ Field Form

Site: 354972  
Location: BEACH  
Well ID: U-25  
Well Type:  Monitoring  Other:  
Well Finish:  Stick Up  Flush Mount  
Measuring Pt:  Top of Casing  Other (specify): \_\_\_\_\_  
Total Depth As Constructed (ftbgs): Screened Interval (ftbgs): \_\_\_\_\_  
Well Casing: Diameter: 2 Material: PVC  
Well Screen: Diameter: 2

## Deployment

Date and Time of Deployment:	Date: 09/14/15	Time: 12:45
Weather Conditions:	Cloudy rain 60°	
Depth to groundwater at time of deployment:	4.80	
Total well depth at time of deployment:	2Q 2015	20.16
Dimensions of HydraSleeve™: Length (in.)	60	Diameter (in.) 2
Deployment Method/Position of Weight:	<input type="checkbox"/> Bottom Anchor: Weight attached to bottom of HydraSleeve™. Weight rests on well bottom. <input type="checkbox"/> Top-Down: Weight attached to bottom of HydraSleeve™. Weight suspended in well. <input type="checkbox"/> Top-Down: Weight attached to top of HydraSleeve™. Weight suspended in well.	
Deployment Depth (Top of HydraSleeve™) (ftbgs):	19.16	

## Retrieval

Date and Time of Retrieval:	Date: 9/16/15	Time: 9:30
Total # of days deployed:	2	
Weather Conditions:	partly sunny, 65°	
Depth to groundwater at time of retrieval:	7.91	
Total well depth at time of retrieval:	—	
Downhole Field Parameters Upon Retrieval:		
Temp: 15.86 (°C)	ORP: 30 (mV)	Water quality meter: HoriBar
pH: 6.65	DO: 10.58 (mg/L)	Serial #: 021832

## Notes/Observations:

## Field Sampling Technician: Name(s) and Company

Name: MAK/HB Company: ARCADIS



## HydraSleeve™ Field Form

Site: 354972  
Location: BEACH  
Well ID: U-26  
Well Type:  Monitoring  Other:  
Well Finish:  Stick Up  Flush Mount  
Measuring Pt:  Top of Casing  Other (specify): \_\_\_\_\_  
Total Depth As Constructed (ftbgs): Screened Interval (ftbgs): \_\_\_\_\_  
Well Casing: Diameter: 2 Material: PVC  
Well Screen: Diameter: 2

## Deployment

Date and Time of Deployment:	Date: 09/14/15	Time: 13:00
Weather Conditions:	Cloudy Rain 60°	
Depth to groundwater at time of deployment:	5.80	
Total well depth at time of deployment:	2Q 2015	19.95
Dimensions of HydraSleeve™: Length (in.)	60	Diameter (in.) 2
Deployment Method/Position of Weight:	<input checked="" type="checkbox"/> Bottom Anchor: Weight attached to bottom of HydraSleeve™. Weight rests on well bottom. <input type="checkbox"/> Top-Down: Weight attached to bottom of HydraSleeve™. Weight suspended in well. <input type="checkbox"/> Top-Down: Weight attached to top of HydraSleeve™. Weight suspended in well.	
Deployment Depth (Top of HydraSleeve™) (ftbgs):	18.95	

## Retrieval

Date and Time of Retrieval:	Date: 9/16/15	Time: 9:30 10:00
Total # of days deployed:	2	
Weather Conditions:	Partly sunny 65°F	
Depth to groundwater at time of retrieval:	7.7 9.58	
Total well depth at time of retrieval:	_____	
Downhole Field Parameters Upon Retrieval:		
Temp: 15.64 (°C)	ORP: -33 (mV)	Water quality meter: HORIBA
pH: 6.66	DO: 14.03 (mg/L)	Serial #: 021832

## Notes/Observations:

--

## Field Sampling Technician: Name(s) and Company

Name  
MA/HOCompany  
ARCADIS



## HydraSleeve™ Field Form

Site: 354972  
Location: BEACH  
Well ID: U-27  
Well Type:  Monitoring  Other:  
Well Finish:  Stick Up  Flush Mount  
Measuring Pt:  Top of Casing  Other (specify): \_\_\_\_\_  
Total Depth As Constructed (ftbgs): \_\_\_\_\_ Screened Interval (ftbgs): \_\_\_\_\_  
Well Casing: Diameter: 2 Material: PVC  
Well Screen: Diameter: 2

## Deployment

Date and Time of Deployment:	Date: 09/14/15	Time: 13:15
Weather Conditions:	Cloudy RAIN, 60°F	
Depth to groundwater at time of deployment:	11.65	
Total well depth at time of deployment:	2Q 2015	22.52
Dimensions of HydraSleeve™: Length (in.)	60	Diameter (in.) 2
Deployment Method/Position of Weight:	<input checked="" type="checkbox"/> Bottom Anchor: Weight attached to bottom of HydraSleeve™. Weight rests on well bottom. <input type="checkbox"/> Top-Down: Weight attached to bottom of HydraSleeve™. Weight suspended in well. <input type="checkbox"/> Top-Down: Weight attached to top of HydraSleeve™. Weight suspended in well.	
Deployment Depth (Top of HydraSleeve™) (ftbgs):	21.52	

## Retrieval

Date and Time of Retrieval:	Date: 9/16/15	Time: 13:30
Total # of days deployed:	2	
Weather Conditions:	PARTLY SUNNY, 60°F	
Depth to groundwater at time of retrieval:	13.42	
Total well depth at time of retrieval:	_____	
Downhole Field Parameters Upon Retrieval:		
Temp: 20.49 (°C)	ORP: -108 (mV)	Water quality meter: Horiba
pH: 6.8	DO: 11.94 (mg/L)	Serial #: 021832

## Notes/Observations:

--

Field Sampling Technician: Name(s) and Company

Name MA/HAO

Company

ARCADIS



## HydraSleeve™ Field Form

DUPLICATE

Loop IN TOP

Site: 354972  
Location: BEACH  
Well ID: P-1A  
Well Type:  Monitoring  Other:  
Well Finish:  Stick Up  Flush Mount  
Measuring Pt:  Top of Casing  Other (specify): \_\_\_\_\_  
Total Depth As Constructed (ftbgs): \_\_\_\_\_ Screened Interval (ftbgs): \_\_\_\_\_  
Well Casing: Diameter: 2 Material: PVC  
Well Screen: Diameter: 2

## Deployment

Date and Time of Deployment:	Date: 09/14/15	Time: 14:20
Weather Conditions:	Cloudy (60°)	
Depth to groundwater at time of deployment:	6.78'	
Total well depth at time of deployment:	2Q 2015	22.34
Dimensions of HydraSleeve™: Length (in.)	60	Diameter (in.) 2
Deployment Method/Position of Weight:	<input checked="" type="checkbox"/> Bottom Anchor: Weight attached to bottom of HydraSleeve™. Weight rests on well bottom. <input type="checkbox"/> Top-Down: Weight attached to bottom of HydraSleeve™. Weight suspended in well. <input type="checkbox"/> Top-Down: Weight attached to top of HydraSleeve™. Weight suspended in well.	
Deployment Depth (Top of HydraSleeve™) (ftbgs):	21.34	

## Retrieval

Date and Time of Retrieval:	Date: 9/16/15	Time: 10:40
Total # of days deployed:	2	
Weather Conditions:	Overcast, 65°	
Depth to groundwater at time of retrieval:	13.07'	
Total well depth at time of retrieval:	—	
Downhole Field Parameters Upon Retrieval:		
Temp: 18.92 (°C)	ORP: ~84 (mV)	Water quality meter: Hovler
pH: 6.83	DO: 10.20 (mg/L)	Serial #: 061832

## Notes/Observations:

--

## Field Sampling Technician: Name(s) and Company

Name MA/HAO Company ARCADIS



## HydraSleeve™ Field Form

Site: 354972  
Location: BEACH  
Well ID: U-28  
Well Type:  Monitoring  Other:  
Well Finish:  Stick Up  Flush Mount  
Measuring Pt:  Top of Casing  Other (specify): \_\_\_\_\_  
Total Depth As Constructed (ftbgs): Screened Interval (ftbgs): \_\_\_\_\_  
Well Casing: Diameter: 2 Material: PVC  
Well Screen: Diameter: 2

## Deployment

Date and Time of Deployment:	Date: 09/14/15	Time: 14:35
Weather Conditions:	Cloudy (65°F)	
Depth to groundwater at time of deployment:	10.05	
Total well depth at time of deployment:	2Q 2015	27.83
Dimensions of HydraSleeve™: Length (in.)	60	Diameter (in.) 2
Deployment Method/Position of Weight:	<input checked="" type="checkbox"/> Bottom Anchor: Weight attached to bottom of HydraSleeve™. Weight rests on well bottom. <input type="checkbox"/> Top-Down: Weight attached to bottom of HydraSleeve™. Weight suspended in well. <input type="checkbox"/> Top-Down: Weight attached to top of HydraSleeve™. Weight suspended in well.	
Deployment Depth (Top of HydraSleeve™) (ftbgs):	26.83	

## Retrieval

Date and Time of Retrieval:	Date: 9/16/15	Time: 14:10
Total # of days deployed:	2	
Weather Conditions:	Cloudy, 65°F	
Depth to groundwater at time of retrieval:	14.05	
Total well depth at time of retrieval:		
Downhole Field Parameters Upon Retrieval:		
Temp: 19.31 (°C)	ORP: -75 (mV)	Water quality meter: HORIZON
pH: 6.72	DO: 13.52 (mg/L)	Serial #: _____

## Notes/Observations:

--

Field Sampling Technician: Name(s) and Company

Name	Company
MA /HO	ARCADIS



## HydraSleeve™ Field Form

Site: 354972  
Location: BEACH  
Well ID: U-29A  
Well Type:  Monitoring  Other:  
Well Finish:  Stick Up  Flush Mount  
Measuring Pt:  Top of Casing  Other (specify): \_\_\_\_\_  
Total Depth As Constructed (ftbgs): Screened Interval (ftbgs): \_\_\_\_\_  
Well Casing: Diameter: 2 Material: PVC  
Well Screen: Diameter: 2

### Deployment

Date and Time of Deployment:	Date: _____	Time: _____
Weather Conditions:	_____	
Depth to groundwater at time of deployment:	_____	
Total well depth at time of deployment:	2Q 2015	19.55
Dimensions of HydraSleeve™: Length (in.)	60	Diameter (in.) 2
Deployment Method/Position of Weight:	<input type="checkbox"/> Bottom Anchor: Weight attached to bottom of HydraSleeve™. Weight rests on well bottom. <input type="checkbox"/> Top-Down: Weight attached to bottom of HydraSleeve™. Weight suspended in well. <input type="checkbox"/> Top-Down: Weight attached to top of HydraSleeve™. Weight suspended in well.	
Deployment Depth (Top of HydraSleeve™) (ftbgs):	18.55	

### Retrieval

Date and Time of Retrieval:	Date: _____	Time: _____
Total # of days deployed:	_____	
Weather Conditions:	_____	
Depth to groundwater at time of retrieval:	_____	
Total well depth at time of retrieval:	_____	
Downhole Field Parameters Upon Retrieval:		
Temp: _____ (°C)	ORP: _____ (mV)	Water quality meter: _____
pH: _____	DO: _____ (mg/L)	Serial #: _____

### Notes/Observations:

_____
-------

### Field Sampling Technician: Name(s) and Company

Name

Company

_____
-------



## HydraSleeve™ Field Form

Site: 354972  
Location: GRAVEL LOT  
Well ID: B-40  
Well Type:  Monitoring  Other:  
Well Finish:  Stick Up  Flush Mount  
Measuring Pt:  Top of Casing  Other (specify): \_\_\_\_\_  
Total Depth As Constructed (ftbgs): \_\_\_\_\_ Screened Interval (ftbgs): \_\_\_\_\_  
Well Casing: Diameter: 2 Material: PVC  
Well Screen: Diameter: 2

skinny sleeve

## Deployment

Date and Time of Deployment:	Date: 09/14/15	Time: 15:45
Weather Conditions:	Cloudy 70°	
Depth to groundwater at time of deployment:	17.66	
Total well depth at time of deployment:	2Q 2015	28.6
Dimensions of HydraSleeve™: Length (in.)	60	Diameter (in.) 2
Deployment Method/Position of Weight:	<input checked="" type="checkbox"/> Bottom Anchor: Weight attached to bottom of HydraSleeve™. Weight rests on well bottom. <input type="checkbox"/> Top-Down: Weight attached to bottom of HydraSleeve™. Weight suspended in well. <input type="checkbox"/> Top-Down: Weight attached to top of HydraSleeve™. Weight suspended in well.	
Deployment Depth (Top of HydraSleeve™) (ftbgs):	27.6	

## Retrieval

Date and Time of Retrieval:	Date: 9/17/15	Time: 09:15
Total # of days deployed:	3	
Weather Conditions:	cloudy, 55°	
Depth to groundwater at time of retrieval:	17.70	
Total well depth at time of retrieval:	—	
Downhole Field Parameters Upon Retrieval:		
Temp: 16.71 (°C)	ORP: -38 (mV)	Water quality meter: Horiba
pH: 6.36	DO: 16.29 (mg/L)	Serial #: 21234

## Notes/Observations:

sleeve wasn't full ~ 2/3 full. Not enough to sample  
2nd PATH amber bottle

## Field Sampling Technician: Name(s) and Company

Name MA/HAO Company ARCADIS



## HydraSleeve™ Field Form

542  
25  
567512  
+28

540

DUPLICATE  
DUP. IN LOOP.

Site: 354972  
Location: NEAR BEACH GATE  
Well ID: B-35  
Well Type:  Monitoring  Other:  
Well Finish:  Stick Up  Flush Mount  
Measuring Pt:  Top of Casing  Other (specify): \_\_\_\_\_  
Total Depth As Constructed (ftbgs): \_\_\_\_\_ Screened Interval (ftbgs): \_\_\_\_\_  
Well Casing: Diameter: 2 Material: PVC  
Well Screen: Diameter: 2

## Deployment

Date and Time of Deployment:	Date: 9/15/15	Time: 15:30
Weather Conditions:	CLOUDY 60°F	
Depth to groundwater at time of deployment:	16.17	
Total well depth at time of deployment:	2Q 2015 29.14	
Dimensions of HydraSleeve™: Length (in.)	60	Diameter (in.) 2
Deployment Method/Position of Weight:	<input checked="" type="checkbox"/> Bottom Anchor: Weight attached to bottom of HydraSleeve™. Weight rests on well bottom. <input type="checkbox"/> Top-Down: Weight attached to bottom of HydraSleeve™. Weight suspended in well. <input type="checkbox"/> Top-Down: Weight attached to top of HydraSleeve™. Weight suspended in well.	
Deployment Depth (Top of HydraSleeve™) (ftbgs):	28.14	

## Retrieval

Date and Time of Retrieval:	Date: 9/17/15	Time: 10:00
Total # of days deployed:	2	
Weather Conditions:	OVERCAST 55°F	
Depth to groundwater at time of retrieval:	16.23	
Total well depth at time of retrieval:	—	
Downhole Field Parameters Upon Retrieval:		
Temp: 17.63 (°C)	ORP: -65 (mV)	Water quality meter: HORIBA
pH: 6.59	DO: 10.33 (mg/L)	Serial #: 021852

## Notes/Observations:

--

## Field Sampling Technician: Name(s) and Company

Name: MA/HO Company: ARCADIS



## HydraSleeve™ Field Form

570  
26  
59.6

Site: 354972  
Location: NEAR BEACH GATE  
Well ID: B-36  
Well Type:  Monitoring  Other:  
Well Finish:  Stick Up  Flush Mount  
Measuring Pt:  Top of Casing  Other (specify): \_\_\_\_\_  
Total Depth As Constructed (ftbgs): Screened Interval (ftbgs):  
Well Casing: Diameter: 2 Material: PVC  
Well Screen: Diameter: 2

## Deployment

Date and Time of Deployment:	Date: 9/15/15	Time: 16:00
Weather Conditions:	CLOUDY 60°F	14.87
Depth to groundwater at time of deployment:		
Total well depth at time of deployment:	2Q 2015	27.48
Dimensions of HydraSleeve™: Length (in.)	60	Diameter (in.) 2
Deployment Method/Position of Weight:	<input type="checkbox"/> Bottom Anchor: Weight attached to bottom of HydraSleeve™. Weight rests on well bottom. <input type="checkbox"/> Top-Down: Weight attached to bottom of HydraSleeve™. Weight suspended in well. <input type="checkbox"/> Top-Down: Weight attached to top of HydraSleeve™. Weight suspended in well.	
Deployment Depth (Top of HydraSleeve™) (ftbgs):	26.48	

## Retrieval

Date and Time of Retrieval:	Date: 9/17/15	Time: 11:15
Total # of days deployed:	2	
Weather Conditions:	partly cloudy	65°
Depth to groundwater at time of retrieval:	14.86	
Total well depth at time of retrieval:	—	
Downhole Field Parameters Upon Retrieval:	Temp: 20.88°C ORP: -90 (mV) DO: 12.46 (mg/L)	
pH: 6.60	Water quality meter: FloraBn Serial #: 021832	

## Notes/Observations:

--

## Field Sampling Technician: Name(s) and Company

Name MA (HJS) Company ARCADIS



## HydraSleeve™ Field Form

**Site:** 354972  
**Location:** GRAVEL LOT  
**Well ID:** B-37  
**Well Type:**  Monitoring  Other: \_\_\_\_\_  
**Well Finish:**  Stick Up  Flush Mount  
**Measuring Pt:**  Top of Casing  Other (specify): \_\_\_\_\_  
**Total Depth As Constructed (ftbgs):** \_\_\_\_\_ **Screened Interval (ftbgs):** \_\_\_\_\_  
**Well Casing:** Diameter: 2 Material: PVC  
**Well Screen:** Diameter: 2

### Deployment

Date and Time of Deployment:	Date:	Time:
Weather Conditions:		
Depth to groundwater at time of deployment:		
Total well depth at time of deployment:	2Q 2015	30.62
Dimensions of HydraSleeve™: Length (in.)	60	Diameter (in.) 2
Deployment Method/Position of Weight:	<input type="checkbox"/> Bottom Anchor: Weight attached to bottom of HydraSleeve™. Weight rests on well bottom. <input type="checkbox"/> Top-Down: Weight attached to bottom of HydraSleeve™. Weight suspended in well. <input type="checkbox"/> Top-Down: Weight attached to top of HydraSleeve™. Weight suspended in well.	
Deployment Depth (Top of HydraSleeve™) (ftbgs):	29.62	

### Retrieval

Date and Time of Retrieval:	Date:	Time:
Total # of days deployed:		
Weather Conditions:		
Depth to groundwater at time of retrieval:		
Total well depth at time of retrieval:		
Downhole Field Parameters Upon Retrieval:		
Temp: _____ (°C)	ORP: _____ (mV)	Water quality meter: _____
pH: _____	DO: _____ (mg/L)	Serial #: _____

### Notes/Observations:

### Field Sampling Technician: Name(s) and Company

Name

Company



## HydraSleeve™ Field Form

**Site:** 354972  
**Location:** GRAVEL LOT  
**Well ID:** U-5  
**Well Type:**  Monitoring  Other: \_\_\_\_\_  
**Well Finish:**  Stick Up  Flush Mount  
**Measuring Pt:**  Top of Casing  Other (specify): \_\_\_\_\_  
**Total Depth As Constructed (ftbgs):** \_\_\_\_\_ **Screened Interval (ftbgs):** \_\_\_\_\_  
**Well Casing:** Diameter: 2 Material: PVC  
**Well Screen:** Diameter: 2

### Deployment

Date and Time of Deployment:	Date:	Time:
Weather Conditions:		
Depth to groundwater at time of deployment:		
Total well depth at time of deployment: 2Q 2015 20.74		
Dimensions of HydraSleeve™: Length (in.)	60	Diameter (in.) 2
Deployment Method/Position of Weight:	<input type="checkbox"/> Bottom Anchor: Weight attached to bottom of HydraSleeve™. Weight rests on well bottom. <input type="checkbox"/> Top-Down: Weight attached to bottom of HydraSleeve™. Weight suspended in well. <input type="checkbox"/> Top-Down: Weight attached to top of HydraSleeve™. Weight suspended in well.	
Deployment Depth (Top of HydraSleeve™) (ftbgs):	19.74	

### Retrieval

Date and Time of Retrieval:	Date:	Time:
Total # of days deployed:		
Weather Conditions:		
Depth to groundwater at time of retrieval:		
Total well depth at time of retrieval:		
Downhole Field Parameters Upon Retrieval:		
Temp: _____ (°C)	ORP: _____ (mV)	Water quality meter: _____
pH: _____	DO: _____ (mg/L)	Serial #: _____

### Notes/Observations:

Field Sampling Technician: Name(s) and Company

Name

Company



## HydraSleeve™ Field Form

Site: 354972  
Location: FRONT AVE  
Well ID: U-4  
Well Type:  Monitoring  Other: \_\_\_\_\_  
Well Finish:  Stick Up  Flush Mount  
Measuring Pt:  Top of Casing  Other (specify): \_\_\_\_\_  
Total Depth As Constructed (ftbgs): \_\_\_\_\_ Screened Interval (ftbgs): \_\_\_\_\_  
Well Casing: Diameter: 2 Material: PVC  
Well Screen: Diameter: 2

### Deployment

Date and Time of Deployment:	Date: _____	Time: _____
Weather Conditions:	_____	
Depth to groundwater at time of deployment:	_____	
Total well depth at time of deployment:	2Q 2015	26.34
Dimensions of HydraSleeve™: Length (in.)	60	Diameter (in.) 2
Deployment Method/Position of Weight:	<input type="checkbox"/> Bottom Anchor: Weight attached to bottom of HydraSleeve™. Weight rests on well bottom. <input type="checkbox"/> Top-Down: Weight attached to bottom of HydraSleeve™. Weight suspended in well. <input type="checkbox"/> Top-Down: Weight attached to top of HydraSleeve™. Weight suspended in well.	
Deployment Depth (Top of HydraSleeve™) (ftbgs):	25.34	

### Retrieval

Date and Time of Retrieval:	Date: _____	Time: _____
Total # of days deployed:	_____	
Weather Conditions:	_____	
Depth to groundwater at time of retrieval:	_____	
Total well depth at time of retrieval:	_____	
Downhole Field Parameters Upon Retrieval:		
Temp: _____ (°C)	ORP: _____ (mV)	Water quality meter: _____
pH: _____	DO: _____ (mg/L)	Serial #: _____

### Notes/Observations:

_____
-------

### Field Sampling Technician: Name(s) and Company

Name

Company



## HydraSleeve™ Field Form

640  
19+ 659  
11601  
19  
679

Site: 354972  
Location: PHILLIPS 66 TANK YARD  
Well ID: U-2  
Well Type:  Monitoring  Other:  
Well Finish:  Stick Up  Flush Mount  
Measuring Pt:  Top of Casing  Other (specify): \_\_\_\_\_  
Total Depth As Constructed (ftbgs): Screened Interval (ftbgs):  
Well Casing: Diameter: 4 Material: PVC  
Well Screen: Diameter: 4

## Deployment

Date and Time of Deployment:	Date: 9/17/15	Time: 3 15:15
Weather Conditions:	OVERCAST 65°	
Depth to groundwater at time of deployment:	15.91	
Total well depth at time of deployment:	2Q 2015	19.72
Dimensions of HydraSleeve™: Length (in.)	60	Diameter (in.) 4
Deployment Method/Position of Weight:	<input type="checkbox"/> Bottom Anchor: Weight attached to bottom of HydraSleeve™. Weight rests on well bottom. <input type="checkbox"/> Top-Down: Weight attached to bottom of HydraSleeve™. Weight suspended in well. <input type="checkbox"/> Top-Down: Weight attached to top of HydraSleeve™. Weight suspended in well.	
Deployment Depth (Top of HydraSleeve™) (ftbgs):	18.72	

## Retrieval

Date and Time of Retrieval:	Date: 9/21/15	Time: 9:30
Total # of days deployed:	4	
Weather Conditions:	PARTLY SUNNY, 60°F	
Depth to groundwater at time of retrieval:	15.93	
Total well depth at time of retrieval:		
Downhole Field Parameters Upon Retrieval:		
Temp: 15.15 (°C)	ORP: 135 (mV)	Water quality meter: HORIBA
pH: 6.00	DO: 26.23 (mg/L)	Serial #: 021832

## Notes/Observations:

--

## Field Sampling Technician: Name(s) and Company

Name	Company
MA/HD	ARCADIS



## HydraSleeve™ Field Form

598  
+ 32  
-----  
630

(630)

Site: 354972  
Location: FRONT GATE  
Well ID: B-4 (MISALIGNED WELL CASING - SKINNY SLEEVE)  
Well Type:  Monitoring  Other:  
Well Finish:  Stick Up  Flush Mount  
Measuring Pt:  Top of Casing  Other (specify): \_\_\_\_\_  
Total Depth As Constructed (ftbgs): \_\_\_\_\_ Screened Interval (ftbgs): \_\_\_\_\_  
Well Casing: Diameter: 2 Material: PVC  
Well Screen: Diameter: 2

## Deployment

Date and Time of Deployment:	Date: 9/17/15	Time: 14:15
Weather Conditions:	overcast 65°	
Depth to groundwater at time of deployment:	18.04	
Total well depth at time of deployment:	2Q 2015	33.19
Dimensions of HydraSleeve™: Length (in.)	60	Diameter (in.) 2
Deployment Method/Position of Weight:	<input type="checkbox"/> Bottom Anchor: Weight attached to bottom of HydraSleeve™. Weight rests on well bottom. <input type="checkbox"/> Top-Down: Weight attached to bottom of HydraSleeve™. Weight suspended in well. <input type="checkbox"/> Top-Down: Weight attached to top of HydraSleeve™. Weight suspended in well.	
Deployment Depth (Top of HydraSleeve™) (ftbgs):	32.19	

## Retrieval

Date and Time of Retrieval:	Date: 9/21/15	Time: 1030
Total # of days deployed:	4	
Weather Conditions:	partly cloudy 60°	
Depth to groundwater at time of retrieval:	18.12	
Total well depth at time of retrieval:	—	
Downhole Field Parameters Upon Retrieval:		
Temp: 14.19 (°C)	ORP: -67 (mV)	Water quality meter: Hoviba
pH: 6.36	DO: 5.59 (mg/L)	Serial #: 021838

## Notes/Observations:

## Field Sampling Technician: Name(s) and Company

Name MA/HAC Company ARCADIS

**Attachment D**

Laboratory Analytical Results

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Seattle

5755 8th Street East

Tacoma, WA 98424

Tel: (253)922-2310

TestAmerica Job ID: 580-53155-1

Client Project/Site: 3Q2015 Willbridge GWM  
B0045452.0018.0042

For:

ARCADIS U.S. Inc  
111 SW Columbia Street  
Suite 670  
Portland, Oregon 97201

Attn: Brian Marcum

Sarah Murphy

Authorized for release by:

10/12/2015 4:58:19 PM

Sarah Murphy, Project Manager I

(253)922-2310

[sarah.murphy@testamericainc.com](mailto:sarah.murphy@testamericainc.com)

### LINKS

Review your project  
results through

Total Access

Have a Question?

Ask  
The  
Expert

Visit us at:

[www.testamericainc.com](http://www.testamericainc.com)

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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# Case Narrative

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53155-1

## Job ID: 580-53155-1

### Laboratory: TestAmerica Seattle

#### Narrative

#### Job Narrative 580-53155-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 9/9/2015 11:10 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 0.5° C, 0.6° C, 1.0° C and 1.2° C.

#### GC/MS VOA

Method(s) 8260B: Surrogate recovery for the following samples was outside control limits: B-28-RI-CHEV (580-53155-4) and BD-RI-CHEV-1 (580-53155-5). Re-extraction and/or re-analysis was performed outside of holding time with acceptable results. Both sets of data are reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### GC/MS Semi VOA

Method(s) 8270C SIM: The following analyte(s) recovered outside control limits for the LCS/LCSD associated with preparation batch 580-200834 and 580-200834 and analytical batch 580-201557: Anthracene, Acenaphthylene and Benzo[a]pyrene. These analytes were outside the Marginal Exceedance Limits and/or were indicative of a systematic problem; therefore, re-extraction and/or re-analysis was performed. Re-analysis yielded little or no improvement in QC results (AB 202733); therefore, original set of data have been qualified and reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### GC Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Definitions/Glossary

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53155-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
X	Surrogate is outside control limits
H	Sample was prepped or analyzed beyond the specified holding time

### GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

### Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
B	Compound was found in the blank and sample.
F5	Duplicate RPD exceeds limit, and one or both sample results are less than 5 times RL. The data are considered valid because the absolute difference is less than the RL.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

## Glossary

### Abbreviation

**These commonly used abbreviations may or may not be present in this report.**

□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53155-1

## Client Sample ID: Trip Blanks

Date Collected: 09/08/15 00:00

Date Received: 09/09/15 11:10

## Lab Sample ID: 580-53155-1

Matrix: Water

### Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0	0.42	ug/L			09/18/15 14:27	1
Ethylbenzene	ND		3.0	0.51	ug/L			09/18/15 14:27	1
Methyl tert-butyl ether	ND		1.0	0.17	ug/L			09/18/15 14:27	1
m-Xylene & p-Xylene	ND		3.0	0.13	ug/L			09/18/15 14:27	1
o-Xylene	ND		2.0	0.49	ug/L			09/18/15 14:27	1
Toluene	ND		2.0	0.44	ug/L			09/18/15 14:27	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	102			75 - 120				09/18/15 14:27	1
Dibromofluoromethane (Surr)	104			85 - 115				09/18/15 14:27	1
1,2-Dichloroethane-d4 (Surr)	111			70 - 120				09/18/15 14:27	1
Toluene-d8 (Surr)	107			85 - 120				09/18/15 14:27	1
Trifluorotoluene (Surr)	95			70 - 136				09/18/15 14:27	1

### Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050	0.027	mg/L			09/17/15 19:28	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	91			50 - 150				09/17/15 19:28	1
Trifluorotoluene (Surr)	106			50 - 150				09/17/15 19:28	1

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53155-1

**Client Sample ID: B-30-RI-CHEV**

**Lab Sample ID: 580-53155-2**

**Matrix: Water**

Date Collected: 09/08/15 10:40

Date Received: 09/09/15 11:10

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0	0.42	ug/L			09/18/15 15:22	1
Ethylbenzene	ND		3.0	0.51	ug/L			09/18/15 15:22	1
Methyl tert-butyl ether	ND		1.0	0.17	ug/L			09/18/15 15:22	1
<b>m-Xylene &amp; p-Xylene</b>	<b>0.27 J</b>		3.0	0.13	ug/L			09/18/15 15:22	1
o-Xylene	ND		2.0	0.49	ug/L			09/18/15 15:22	1
Toluene	ND		2.0	0.44	ug/L			09/18/15 15:22	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	103			75 - 120				09/18/15 15:22	1
Dibromofluoromethane (Surr)	102			85 - 115				09/18/15 15:22	1
1,2-Dichloroethane-d4 (Surr)	119			70 - 120				09/18/15 15:22	1
Toluene-d8 (Surr)	102			85 - 120				09/18/15 15:22	1
Trifluorotoluene (Surr)	98			70 - 136				09/18/15 15:22	1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Naphthalene</b>	<b>0.022</b>		0.011	0.0033	ug/L			09/15/15 16:36	09/23/15 21:53
2-Methylnaphthalene	ND		0.015	0.0033	ug/L			09/15/15 16:36	09/23/15 21:53
<b>1-Methylnaphthalene</b>	<b>0.074</b>		0.011	0.0033	ug/L			09/15/15 16:36	09/23/15 21:53
<b>Acenaphthylene</b>	<b>0.0067 J *</b>		0.011	0.0033	ug/L			09/15/15 16:36	09/23/15 21:53
<b>Acenaphthene</b>	<b>0.031</b>		0.011	0.0033	ug/L			09/15/15 16:36	09/23/15 21:53
<b>Fluorene</b>	<b>0.032</b>		0.011	0.0033	ug/L			09/15/15 16:36	09/23/15 21:53
Phenanthrene	ND		0.11	0.030	ug/L			09/15/15 16:36	09/23/15 21:53
<b>Anthracene</b>	<b>0.0079 J *</b>		0.028	0.0078	ug/L			09/15/15 16:36	09/23/15 21:53
<b>Fluoranthene</b>	<b>0.015 J</b>		0.056	0.013	ug/L			09/15/15 16:36	09/23/15 21:53
<b>Pyrene</b>	<b>0.033 J</b>		0.056	0.015	ug/L			09/15/15 16:36	09/23/15 21:53
<b>Benzo[a]anthracene</b>	<b>0.0035 J</b>		0.011	0.0033	ug/L			09/15/15 16:36	09/23/15 21:53
<b>Chrysene</b>	<b>0.0045 J</b>		0.011	0.0033	ug/L			09/15/15 16:36	09/23/15 21:53
<b>Benzo[a]pyrene</b>	<b>0.0033 J *</b>		0.011	0.0033	ug/L			09/15/15 16:36	09/23/15 21:53
Indeno[1,2,3-cd]pyrene	ND		0.011	0.0033	ug/L			09/15/15 16:36	09/23/15 21:53
Dibenz(a,h)anthracene	ND		0.011	0.0033	ug/L			09/15/15 16:36	09/23/15 21:53
<b>Benzo[g,h,i]perylene</b>	<b>0.0034 J</b>		0.011	0.0033	ug/L			09/15/15 16:36	09/23/15 21:53
<b>Benzo[b]fluoranthene</b>	<b>0.0072 J</b>		0.011	0.0033	ug/L			09/15/15 16:36	09/23/15 21:53
<b>Benzo[k]fluoranthene</b>	<b>0.0018 J</b>		0.011	0.0017	ug/L			09/15/15 16:36	09/23/15 21:53
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Terphenyl-d14	86			64 - 150				09/15/15 16:36	09/23/15 21:53

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Gasoline</b>	<b>0.069</b>		0.050	0.027	mg/L			09/18/15 00:26	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	91			50 - 150				09/18/15 00:26	1
Trifluorotoluene (Surr)	105			50 - 150				09/18/15 00:26	1

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.99		0.12	0.015	mg/L			09/22/15 11:29	09/28/15 22:08
Motor Oil (>C24-C36)	0.38		0.26	0.010	mg/L			09/22/15 11:29	09/28/15 22:08

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53155-1

**Client Sample ID: B-30-RI-CHEV**

Date Collected: 09/08/15 10:40

Date Received: 09/09/15 11:10

**Lab Sample ID: 580-53155-2**

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o-Terphenyl</i>	100		50 - 150	09/22/15 11:29	09/28/15 22:08	1

**Method: 1631E - Mercury, Low Level (CVAFS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	70		5.0	1.6	ng/L	D	09/11/15 15:00	09/14/15 14:16	10

**Method: 6020 - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0045	J	0.010	0.0027	mg/L	D	09/21/15 17:30	09/23/15 02:32	10
Barium	0.063	B	0.012	0.00054	mg/L		09/21/15 17:30	09/23/15 02:32	10
Cadmium	0.00086	J	0.0040	0.00028	mg/L		09/21/15 17:30	09/23/15 02:32	10
Chromium	0.0018	J	0.0040	0.0014	mg/L		09/21/15 17:30	09/23/15 02:32	10
Copper	0.0082	J	0.020	0.0060	mg/L		09/21/15 17:30	09/23/15 02:32	10
Lead	0.0015	J B	0.0040	0.00034	mg/L		09/21/15 17:30	09/23/15 02:32	10
Manganese	5.0		0.020	0.0035	mg/L		09/21/15 17:30	09/23/15 02:32	10
Selenium	ND		0.010	0.0030	mg/L		09/21/15 17:30	09/23/15 02:32	10
Silver	ND		0.0040	0.00030	mg/L		09/21/15 17:30	09/23/15 02:32	10
Zinc	0.040	J	0.070	0.019	mg/L		09/21/15 17:30	09/23/15 02:32	10

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53155-1

**Client Sample ID: B-29-RI-CHEV**

**Lab Sample ID: 580-53155-3**

**Matrix: Water**

Date Collected: 09/08/15 11:20

Date Received: 09/09/15 11:10

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0	0.42	ug/L			09/18/15 15:50	1
Ethylbenzene	ND		3.0	0.51	ug/L			09/18/15 15:50	1
<b>Methyl tert-butyl ether</b>	<b>0.17</b>	<b>J</b>	1.0	0.17	ug/L			09/18/15 15:50	1
m-Xylene & p-Xylene	ND		3.0	0.13	ug/L			09/18/15 15:50	1
o-Xylene	ND		2.0	0.49	ug/L			09/18/15 15:50	1
Toluene	ND		2.0	0.44	ug/L			09/18/15 15:50	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	106			75 - 120				09/18/15 15:50	1
Dibromofluoromethane (Surr)	110			85 - 115				09/18/15 15:50	1
1,2-Dichloroethane-d4 (Surr)	117			70 - 120				09/18/15 15:50	1
Toluene-d8 (Surr)	107			85 - 120				09/18/15 15:50	1
Trifluorotoluene (Surr)	96			70 - 136				09/18/15 15:50	1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Naphthalene</b>	<b>0.0046</b>	<b>J</b>	0.010	0.0031	ug/L		09/15/15 16:36	09/23/15 22:27	1
2-Methylnaphthalene	ND		0.013	0.0031	ug/L		09/15/15 16:36	09/23/15 22:27	1
1-Methylnaphthalene	ND		0.010	0.0031	ug/L		09/15/15 16:36	09/23/15 22:27	1
Acenaphthylene	ND *		0.010	0.0031	ug/L		09/15/15 16:36	09/23/15 22:27	1
Acenaphthene	ND		0.010	0.0031	ug/L		09/15/15 16:36	09/23/15 22:27	1
Fluorene	ND		0.010	0.0031	ug/L		09/15/15 16:36	09/23/15 22:27	1
Phenanthrene	ND		0.10	0.027	ug/L		09/15/15 16:36	09/23/15 22:27	1
Anthracene	ND *		0.025	0.0071	ug/L		09/15/15 16:36	09/23/15 22:27	1
Fluoranthene	ND		0.051	0.012	ug/L		09/15/15 16:36	09/23/15 22:27	1
Pyrene	ND		0.051	0.013	ug/L		09/15/15 16:36	09/23/15 22:27	1
Benzo[a]anthracene	ND		0.010	0.0031	ug/L		09/15/15 16:36	09/23/15 22:27	1
Chrysene	ND		0.010	0.0031	ug/L		09/15/15 16:36	09/23/15 22:27	1
Benzo[a]pyrene	ND *		0.010	0.0031	ug/L		09/15/15 16:36	09/23/15 22:27	1
Indeno[1,2,3-cd]pyrene	ND		0.010	0.0031	ug/L		09/15/15 16:36	09/23/15 22:27	1
Dibenz(a,h)anthracene	ND		0.010	0.0031	ug/L		09/15/15 16:36	09/23/15 22:27	1
Benzo[g,h,i]perylene	ND		0.010	0.0031	ug/L		09/15/15 16:36	09/23/15 22:27	1
Benzo[b]fluoranthene	ND		0.010	0.0031	ug/L		09/15/15 16:36	09/23/15 22:27	1
Benzo[k]fluoranthene	ND		0.010	0.0015	ug/L		09/15/15 16:36	09/23/15 22:27	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Terphenyl-d14	83			64 - 150				09/15/15 16:36	09/23/15 22:27

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050	0.027	mg/L			09/18/15 00:59	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	90			50 - 150				09/18/15 00:59	1
Trifluorotoluene (Surr)	107			50 - 150				09/18/15 00:59	1

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.42		0.11	0.015	mg/L		09/22/15 11:29	09/28/15 22:26	1
Motor Oil (>C24-C36)	0.28		0.26	0.010	mg/L		09/22/15 11:29	09/28/15 22:26	1

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53155-1

## Client Sample ID: B-29-RI-CHEV

Date Collected: 09/08/15 11:20

Date Received: 09/09/15 11:10

## Lab Sample ID: 580-53155-3

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o-Terphenyl</i>	97		50 - 150	09/22/15 11:29	09/28/15 22:26	1

### Method: 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	190		5.0	1.6	ng/L	D	09/11/15 15:00	09/14/15 14:20	10

### Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.010	0.0027	mg/L	D	09/21/15 17:30	09/23/15 03:04	10
Barium	0.084	B	0.012	0.00054	mg/L		09/21/15 17:30	09/23/15 03:04	10
Cadmium	0.0016	J	0.0040	0.00028	mg/L		09/21/15 17:30	09/23/15 03:04	10
Chromium	0.0027	J	0.0040	0.0014	mg/L		09/21/15 17:30	09/23/15 03:04	10
Copper	0.038		0.020	0.0060	mg/L		09/21/15 17:30	09/23/15 03:04	10
Lead	0.0012	J B	0.0040	0.00034	mg/L		09/21/15 17:30	09/23/15 03:04	10
Manganese	4.4		0.020	0.0035	mg/L		09/21/15 17:30	09/23/15 03:04	10
Selenium	ND		0.010	0.0030	mg/L		09/21/15 17:30	09/23/15 03:04	10
Silver	ND		0.0040	0.00030	mg/L		09/21/15 17:30	09/23/15 03:04	10
Zinc	ND		0.070	0.019	mg/L		09/21/15 17:30	09/23/15 03:04	10

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53155-1

**Client Sample ID: B-28-RI-CHEV**

Date Collected: 09/08/15 13:00

Date Received: 09/09/15 11:10

**Lab Sample ID: 580-53155-4**

Matrix: Water

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0	0.42	ug/L			09/18/15 16:17	1
Ethylbenzene	ND		3.0	0.51	ug/L			09/18/15 16:17	1
<b>Methyl tert-butyl ether</b>	<b>1.5</b>		1.0	0.17	ug/L			09/18/15 16:17	1
m-Xylene & p-Xylene	ND		3.0	0.13	ug/L			09/18/15 16:17	1
o-Xylene	ND		2.0	0.49	ug/L			09/18/15 16:17	1
Toluene	ND		2.0	0.44	ug/L			09/18/15 16:17	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	107			75 - 120				09/18/15 16:17	1
Dibromofluoromethane (Surr)	111			85 - 115				09/18/15 16:17	1
1,2-Dichloroethane-d4 (Surr)	124	X		70 - 120				09/18/15 16:17	1
Toluene-d8 (Surr)	107			85 - 120				09/18/15 16:17	1
Trifluorotoluene (Surr)	95			70 - 136				09/18/15 16:17	1

## Method: 8260B - Volatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND	H	2.0	0.42	ug/L			09/30/15 19:12	1
Ethylbenzene	ND	H	3.0	0.51	ug/L			09/30/15 19:12	1
<b>Methyl tert-butyl ether</b>	<b>1.8 H</b>		1.0	0.17	ug/L			09/30/15 19:12	1
m-Xylene & p-Xylene	ND	H	3.0	0.13	ug/L			09/30/15 19:12	1
o-Xylene	ND	H	2.0	0.49	ug/L			09/30/15 19:12	1
Toluene	ND	H	2.0	0.44	ug/L			09/30/15 19:12	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	111			75 - 120				09/30/15 19:12	1
Dibromofluoromethane (Surr)	104			85 - 115				09/30/15 19:12	1
1,2-Dichloroethane-d4 (Surr)	113			70 - 120				09/30/15 19:12	1
Toluene-d8 (Surr)	96			85 - 120				09/30/15 19:12	1
Trifluorotoluene (Surr)	107			70 - 136				09/30/15 19:12	1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Naphthalene</b>	<b>0.011</b>		0.010	0.0031	ug/L			09/15/15 16:36	09/23/15 23:00
2-Methylnaphthalene	ND		0.013	0.0031	ug/L			09/15/15 16:36	09/23/15 23:00
1-Methylnaphthalene	ND		0.010	0.0031	ug/L			09/15/15 16:36	09/23/15 23:00
Acenaphthylene	ND *		0.010	0.0031	ug/L			09/15/15 16:36	09/23/15 23:00
Acenaphthene	ND		0.010	0.0031	ug/L			09/15/15 16:36	09/23/15 23:00
Fluorene	ND		0.010	0.0031	ug/L			09/15/15 16:36	09/23/15 23:00
Phenanthrene	ND		0.10	0.027	ug/L			09/15/15 16:36	09/23/15 23:00
Anthracene	ND *		0.026	0.0072	ug/L			09/15/15 16:36	09/23/15 23:00
Fluoranthene	ND		0.051	0.012	ug/L			09/15/15 16:36	09/23/15 23:00
Pyrene	ND		0.051	0.013	ug/L			09/15/15 16:36	09/23/15 23:00
Benzo[a]anthracene	ND		0.010	0.0031	ug/L			09/15/15 16:36	09/23/15 23:00
Chrysene	ND		0.010	0.0031	ug/L			09/15/15 16:36	09/23/15 23:00
Benzo[a]pyrene	ND *		0.010	0.0031	ug/L			09/15/15 16:36	09/23/15 23:00
Indeno[1,2,3-cd]pyrene	ND		0.010	0.0031	ug/L			09/15/15 16:36	09/23/15 23:00
Dibenz(a,h)anthracene	ND		0.010	0.0031	ug/L			09/15/15 16:36	09/23/15 23:00
Benzo[g,h,i]perylene	ND		0.010	0.0031	ug/L			09/15/15 16:36	09/23/15 23:00
<b>Benzo[b]fluoranthene</b>	<b>0.0046 J</b>		0.010	0.0031	ug/L			09/15/15 16:36	09/23/15 23:00
<b>Benzo[k]fluoranthene</b>	<b>0.0015 J</b>		0.010	0.0015	ug/L			09/15/15 16:36	09/23/15 23:00

TestAmerica Seattle

# **Client Sample Results**

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53155-1

## **Client Sample ID: B-28-RI-CHEV**

**Date Collected:** 09/08/15 13:00

Date Received: 09/09/15 11:10

**Lab Sample ID: 580-53155-4**

## Matrix: Water

<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Factor</b>
Terphenyl-d14	84		64 - 150	09/15/15 16:36	09/23/15 23:00	1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050	0.027	mg/L			09/18/15 02:06	1

<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	89		50 - 150		09/18/15 02:06	1
Trifluorotoluene (Surr)	105		50 - 150		09/18/15 02:06	1

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.47		0.12	0.016	mg/L	09/22/15 11:29	09/28/15 22:44		1
Motor Oil (>C24-C36)	0.31		0.27	0.011	mg/L	09/22/15 11:29	09/28/15 22:44		1

<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Factor</b>
Total Nitrogen	74		50-150	00/00/15 11:26	00/00/15 00:14	1

## **Method: 1631E - Mercury, Low Level (CVAES)**

Method: 163TE - Mercury, Low Level (CVAFS)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	27	P	5.0	1.6	ng/l	00/11/15 15:00	00/11/15 14:24		10

Method: 6020 - Metals (ICP/MS)

Method: 6020 - Metals (ICP/MS)									
Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0035	J	0.010	0.0027	mg/L		09/21/15 17:30	09/23/15 03:09	10
Barium	0.065	B	0.012	0.00054	mg/L		09/21/15 17:30	09/23/15 03:09	10
Cadmium	0.0015	J	0.0040	0.00028	mg/L		09/21/15 17:30	09/23/15 03:09	10
Chromium	0.020		0.0040	0.0014	mg/L		09/21/15 17:30	09/23/15 03:09	10
Copper	0.041		0.020	0.0060	mg/L		09/21/15 17:30	09/23/15 03:09	10
Lead	0.0018	J B	0.0040	0.00034	mg/L		09/21/15 17:30	09/23/15 03:09	10
Manganese	1.2		0.020	0.0035	mg/L		09/21/15 17:30	09/23/15 03:09	10
Selenium	ND		0.010	0.0030	mg/L		09/21/15 17:30	09/23/15 03:09	10
Silver	ND		0.0040	0.00030	mg/L		09/21/15 17:30	09/23/15 03:09	10
Zinc	ND		0.070	0.019	mg/L		09/21/15 17:30	09/23/15 03:09	10

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53155-1

**Client Sample ID: BD-RI-CHEV-1**

Date Collected: 09/08/15 00:00

Date Received: 09/09/15 11:10

**Lab Sample ID: 580-53155-5**

Matrix: Water

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0	0.42	ug/L			09/18/15 16:45	1
Ethylbenzene	ND		3.0	0.51	ug/L			09/18/15 16:45	1
<b>Methyl tert-butyl ether</b>	<b>1.4</b>		1.0	0.17	ug/L			09/18/15 16:45	1
m-Xylene & p-Xylene	ND		3.0	0.13	ug/L			09/18/15 16:45	1
o-Xylene	ND		2.0	0.49	ug/L			09/18/15 16:45	1
Toluene	ND		2.0	0.44	ug/L			09/18/15 16:45	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	103			75 - 120				09/18/15 16:45	1
Dibromofluoromethane (Surr)	105			85 - 115				09/18/15 16:45	1
1,2-Dichloroethane-d4 (Surr)	122	X		70 - 120				09/18/15 16:45	1
Toluene-d8 (Surr)	101			85 - 120				09/18/15 16:45	1
Trifluorotoluene (Surr)	97			70 - 136				09/18/15 16:45	1

## Method: 8260B - Volatile Organic Compounds (GC/MS) - RA

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND	H	2.0	0.42	ug/L			09/30/15 19:39	1
Ethylbenzene	ND	H	3.0	0.51	ug/L			09/30/15 19:39	1
<b>Methyl tert-butyl ether</b>	<b>1.8 H</b>		1.0	0.17	ug/L			09/30/15 19:39	1
m-Xylene & p-Xylene	ND	H	3.0	0.13	ug/L			09/30/15 19:39	1
o-Xylene	ND	H	2.0	0.49	ug/L			09/30/15 19:39	1
Toluene	ND	H	2.0	0.44	ug/L			09/30/15 19:39	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	110			75 - 120				09/30/15 19:39	1
Dibromofluoromethane (Surr)	103			85 - 115				09/30/15 19:39	1
1,2-Dichloroethane-d4 (Surr)	110			70 - 120				09/30/15 19:39	1
Toluene-d8 (Surr)	95			85 - 120				09/30/15 19:39	1
Trifluorotoluene (Surr)	107			70 - 136				09/30/15 19:39	1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Naphthalene</b>	<b>0.012</b>		0.011	0.0033	ug/L			09/15/15 16:36	09/23/15 23:33
2-Methylnaphthalene	ND		0.014	0.0033	ug/L			09/15/15 16:36	09/23/15 23:33
1-Methylnaphthalene	ND		0.011	0.0033	ug/L			09/15/15 16:36	09/23/15 23:33
Acenaphthylene	ND	*	0.011	0.0033	ug/L			09/15/15 16:36	09/23/15 23:33
Acenaphthene	ND		0.011	0.0033	ug/L			09/15/15 16:36	09/23/15 23:33
Fluorene	ND		0.011	0.0033	ug/L			09/15/15 16:36	09/23/15 23:33
Phenanthrene	ND		0.11	0.029	ug/L			09/15/15 16:36	09/23/15 23:33
Anthracene	ND	*	0.027	0.0077	ug/L			09/15/15 16:36	09/23/15 23:33
Fluoranthene	ND		0.055	0.013	ug/L			09/15/15 16:36	09/23/15 23:33
Pyrene	ND		0.055	0.014	ug/L			09/15/15 16:36	09/23/15 23:33
Benzo[a]anthracene	ND		0.011	0.0033	ug/L			09/15/15 16:36	09/23/15 23:33
Chrysene	ND		0.011	0.0033	ug/L			09/15/15 16:36	09/23/15 23:33
<b>Benzo[a]pyrene</b>	<b>0.0035 J*</b>		0.011	0.0033	ug/L			09/15/15 16:36	09/23/15 23:33
<b>Indeno[1,2,3-cd]pyrene</b>	<b>0.0048 J</b>		0.011	0.0033	ug/L			09/15/15 16:36	09/23/15 23:33
Dibenz(a,h)anthracene	ND		0.011	0.0033	ug/L			09/15/15 16:36	09/23/15 23:33
<b>Benzo[g,h,i]perylene</b>	<b>0.0047 J</b>		0.011	0.0033	ug/L			09/15/15 16:36	09/23/15 23:33
<b>Benzo[b]fluoranthene</b>	<b>0.0076 J</b>		0.011	0.0033	ug/L			09/15/15 16:36	09/23/15 23:33
<b>Benzo[k]fluoranthene</b>	<b>0.0022 J</b>		0.011	0.0016	ug/L			09/15/15 16:36	09/23/15 23:33

TestAmerica Seattle

## **Client Sample Results**

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53155-1

**Client Sample ID: BD-RI-CHEV-1**

Date Collected: 09/08/15 00:00

Date Received: 09/09/15 11:10

**Lab Sample ID: 580-53155-5**

## Matrix: Water

<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Factor</b>
Terphenyl-d14	78		64 - 150	09/15/15 16:36	09/23/15 23:33	1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050	0.027	mg/L			09/18/15 02:39	1

<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Factor</b>
4-Bromofluorobenzene (Surrogate)	90		50 - 150		09/18/15 02:39	1
Trifluorotoluene (Surrogate)	106		50 - 150		09/18/15 02:39	1

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.63		0.12	0.016	mg/L		09/22/15 11:29	09/28/15 23:02	1
Motor Oil (>C24-C36)	0.38		0.27	0.011	mg/L		09/22/15 11:29	09/28/15 23:02	1

<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>	<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Factor</b>
<i>o</i> -Terphenyl	87		50 - 150	09/22/15 11:29	09/28/15 23:02	1

Method: 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	27		5.0	1.6	ng/l	09/11/15 15:00	09/14/15 14:27		10

Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0040	J	0.010	0.0027	mg/L		09/21/15 17:30	09/23/15 03:13	10
Barium	0.067	B	0.012	0.00054	mg/L		09/21/15 17:30	09/23/15 03:13	10
Cadmium	0.0017	J	0.0040	0.00028	mg/L		09/21/15 17:30	09/23/15 03:13	10
Chromium	0.0034	J	0.0040	0.0014	mg/L		09/21/15 17:30	09/23/15 03:13	10
Copper	0.026		0.020	0.0060	mg/L		09/21/15 17:30	09/23/15 03:13	10
Lead	0.0019	J B	0.0040	0.00034	mg/L		09/21/15 17:30	09/23/15 03:13	10
Manganese	1.2		0.020	0.0035	mg/L		09/21/15 17:30	09/23/15 03:13	10
Selenium	ND		0.010	0.0030	mg/L		09/21/15 17:30	09/23/15 03:13	10
Silver	ND		0.0040	0.00030	mg/L		09/21/15 17:30	09/23/15 03:13	10
Zinc	ND		0.070	0.019	mg/L		09/21/15 17:30	09/23/15 03:13	10

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53155-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 580-201150/4**

**Matrix: Water**

**Analysis Batch: 201150**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		2.0	0.42	ug/L			09/18/15 12:27	1
Ethylbenzene	ND		3.0	0.51	ug/L			09/18/15 12:27	1
Methyl tert-butyl ether	ND		1.0	0.17	ug/L			09/18/15 12:27	1
m-Xylene & p-Xylene	ND		3.0	0.13	ug/L			09/18/15 12:27	1
o-Xylene	ND		2.0	0.49	ug/L			09/18/15 12:27	1
Toluene	ND		2.0	0.44	ug/L			09/18/15 12:27	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	103		75 - 120		09/18/15 12:27	1
Dibromofluoromethane (Surr)	110		85 - 115		09/18/15 12:27	1
1,2-Dichloroethane-d4 (Surr)	118		70 - 120		09/18/15 12:27	1
Toluene-d8 (Surr)	108		85 - 120		09/18/15 12:27	1
Trifluorotoluene (Surr)	97		70 - 136		09/18/15 12:27	1

**Lab Sample ID: LCS 580-201150/5**

**Matrix: Water**

**Analysis Batch: 201150**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.	Limits
	Added	Result	Qualifier					
Benzene	20.1	17.4		ug/L		87	80 - 120	
Ethylbenzene	20.1	19.6		ug/L		98	75 - 125	
Methyl tert-butyl ether	20.0	17.7		ug/L		88	65 - 125	
m-Xylene & p-Xylene	20.0	19.8		ug/L		99	75 - 130	
o-Xylene	20.0	19.9		ug/L		99	80 - 120	
Toluene	20.0	18.7		ug/L		93	75 - 120	

Surrogate	LCSD	LCSD	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	103		75 - 120			
Dibromofluoromethane (Surr)	103		85 - 115			
1,2-Dichloroethane-d4 (Surr)	112		70 - 120			
Toluene-d8 (Surr)	102		85 - 120			
Trifluorotoluene (Surr)	97		70 - 136			

**Lab Sample ID: LCSD 580-201150/6**

**Matrix: Water**

**Analysis Batch: 201150**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec	%Rec.	RPD	RPD Limit
	Added	Result	Qualifier						
Benzene	20.1	18.9		ug/L		94	80 - 120	8	30
Ethylbenzene	20.1	20.7		ug/L		103	75 - 125	5	30
Methyl tert-butyl ether	20.0	20.2		ug/L		101	65 - 125	14	30
m-Xylene & p-Xylene	20.0	20.9		ug/L		104	75 - 130	5	30
o-Xylene	20.0	21.2		ug/L		106	80 - 120	6	30
Toluene	20.0	20.1		ug/L		101	75 - 120	8	30

Surrogate	LCSD	LCSD	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	98		75 - 120			

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53155-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 580-201150/6**

**Matrix: Water**

**Analysis Batch: 201150**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Dibromofluoromethane (Surr)	108		85 - 115
1,2-Dichloroethane-d4 (Surr)	113		70 - 120
Toluene-d8 (Surr)	107		85 - 120
Trifluorotoluene (Surr)	97		70 - 136

**Lab Sample ID: MB 580-202129/4**

**Matrix: Water**

**Analysis Batch: 202129**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0	0.42	ug/L			09/30/15 14:17	1
Ethylbenzene	ND		3.0	0.51	ug/L			09/30/15 14:17	1
Methyl tert-butyl ether	ND		1.0	0.17	ug/L			09/30/15 14:17	1
m-Xylene & p-Xylene	ND		3.0	0.13	ug/L			09/30/15 14:17	1
o-Xylene	ND		2.0	0.49	ug/L			09/30/15 14:17	1
Toluene	ND		2.0	0.44	ug/L			09/30/15 14:17	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	108		75 - 120					09/30/15 14:17	1
Dibromofluoromethane (Surr)	104		85 - 115					09/30/15 14:17	1
1,2-Dichloroethane-d4 (Surr)	112		70 - 120					09/30/15 14:17	1
Toluene-d8 (Surr)	97		85 - 120					09/30/15 14:17	1
Trifluorotoluene (Surr)	108		70 - 136					09/30/15 14:17	1

**Lab Sample ID: LCS 580-202129/5**

**Matrix: Water**

**Analysis Batch: 202129**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.
Benzene	20.1	18.9		ug/L		94	80 - 120
Ethylbenzene	20.1	19.0		ug/L		95	75 - 125
Methyl tert-butyl ether	20.0	21.0		ug/L		105	65 - 125
m-Xylene & p-Xylene	20.0	20.5		ug/L		102	75 - 130
o-Xylene	20.0	20.0		ug/L		100	80 - 120
Toluene	20.0	18.7		ug/L		94	75 - 120
Surrogate	LCS %Recovery	LCS Qualifier	Limits				Limits
4-Bromofluorobenzene (Surr)	107		75 - 120				
Dibromofluoromethane (Surr)	104		85 - 115				
1,2-Dichloroethane-d4 (Surr)	106		70 - 120				
Toluene-d8 (Surr)	97		85 - 120				
Trifluorotoluene (Surr)	112		70 - 136				

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53155-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 580-202129/6**

**Matrix: Water**

**Analysis Batch: 202129**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	20.1	19.2		ug/L		96	80 - 120	1	30
Ethylbenzene	20.1	19.1		ug/L		95	75 - 125	0	30
Methyl tert-butyl ether	20.0	20.9		ug/L		104	65 - 125	1	30
m-Xylene & p-Xylene	20.0	20.5		ug/L		102	75 - 130	0	30
o-Xylene	20.0	20.3		ug/L		101	80 - 120	1	30
Toluene	20.0	19.0		ug/L		95	75 - 120	1	30
<hr/>									
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
4-Bromofluorobenzene (Surr)	107		75 - 120						
Dibromofluoromethane (Surr)	103		85 - 115						
1,2-Dichloroethane-d4 (Surr)	108		70 - 120						
Toluene-d8 (Surr)	96		85 - 120						
Trifluorotoluene (Surr)	108		70 - 136						

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

**Lab Sample ID: MB 580-200834/1-A**

**Matrix: Water**

**Analysis Batch: 201557**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 200834**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.010	0.0030	ug/L		09/15/15 16:36	09/23/15 18:04	1
2-Methylnaphthalene	ND		0.013	0.0030	ug/L		09/15/15 16:36	09/23/15 18:04	1
1-Methylnaphthalene	ND		0.010	0.0030	ug/L		09/15/15 16:36	09/23/15 18:04	1
Acenaphthylene	ND		0.010	0.0030	ug/L		09/15/15 16:36	09/23/15 18:04	1
Acenaphthene	ND		0.010	0.0030	ug/L		09/15/15 16:36	09/23/15 18:04	1
Fluorene	ND		0.010	0.0030	ug/L		09/15/15 16:36	09/23/15 18:04	1
Phenanthrene	ND		0.10	0.027	ug/L		09/15/15 16:36	09/23/15 18:04	1
Anthracene	ND		0.025	0.0070	ug/L		09/15/15 16:36	09/23/15 18:04	1
Fluoranthene	ND		0.050	0.012	ug/L		09/15/15 16:36	09/23/15 18:04	1
Pyrene	ND		0.050	0.013	ug/L		09/15/15 16:36	09/23/15 18:04	1
Benzo[a]anthracene	ND		0.010	0.0030	ug/L		09/15/15 16:36	09/23/15 18:04	1
Chrysene	ND		0.010	0.0030	ug/L		09/15/15 16:36	09/23/15 18:04	1
Benzo[a]pyrene	ND		0.010	0.0030	ug/L		09/15/15 16:36	09/23/15 18:04	1
Indeno[1,2,3-cd]pyrene	ND		0.010	0.0030	ug/L		09/15/15 16:36	09/23/15 18:04	1
Dibenzo(a,h)anthracene	ND		0.010	0.0030	ug/L		09/15/15 16:36	09/23/15 18:04	1
Benzo[g,h,i]perylene	ND		0.010	0.0030	ug/L		09/15/15 16:36	09/23/15 18:04	1
Benzo[b]fluoranthene	ND		0.010	0.0030	ug/L		09/15/15 16:36	09/23/15 18:04	1
Benzo[k]fluoranthene	ND		0.010	0.0015	ug/L		09/15/15 16:36	09/23/15 18:04	1
<hr/>									
Surrogate	MB %Recovery	MB Qualifier	Limits						
Terphenyl-d14	79		64 - 150						
				Prepared	Analyzed		Dil Fac		
				09/15/15 16:36	09/23/15 18:04		1		

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53155-1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

**Lab Sample ID: LCS 580-200834/2-A**

**Matrix: Water**

**Analysis Batch: 201557**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 200834**

**%Rec.**

**Limits**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Naphthalene	1.00	0.832		ug/L	83	56 - 125	
2-Methylnaphthalene	1.00	0.879		ug/L	88	56 - 125	
1-Methylnaphthalene	1.00	0.889		ug/L	89	54 - 125	
Acenaphthylene	1.00	0.514	*	ug/L	51	62 - 125	
Acenaphthene	1.00	0.872		ug/L	87	63 - 125	
Fluorene	1.00	0.923		ug/L	92	69 - 125	
Phenanthrene	1.00	0.866		ug/L	87	70 - 125	
Anthracene	1.00	0.341	*	ug/L	34	50 - 125	
Fluoranthene	1.00	1.00		ug/L	100	70 - 145	
Pyrene	1.00	0.926		ug/L	93	70 - 133	
Benzo[a]anthracene	1.00	0.753		ug/L	75	65 - 125	
Chrysene	1.00	0.906		ug/L	91	70 - 125	
Benzo[a]pyrene	1.00	0.239	*	ug/L	24	45 - 125	
Indeno[1,2,3-cd]pyrene	1.00	0.862		ug/L	86	70 - 136	
Dibenz(a,h)anthracene	1.00	0.896		ug/L	90	69 - 154	
Benzo[g,h,i]perylene	1.00	0.769		ug/L	77	65 - 153	
Benzo[b]fluoranthene	1.00	0.859		ug/L	86	70 - 129	
Benzo[k]fluoranthene	1.00	0.905		ug/L	90	70 - 123	
<b>Surrogate</b>		<b>LCS</b>	<b>LCS</b>				
		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			
Terphenyl-d14		91		64 - 150			

**Lab Sample ID: LCSD 580-200834/3-A**

**Matrix: Water**

**Analysis Batch: 201557**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 200834**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Naphthalene	1.00	0.812		ug/L	81	56 - 125		2	20
2-Methylnaphthalene	1.00	0.845		ug/L	85	56 - 125		4	20
1-Methylnaphthalene	1.00	0.847		ug/L	85	54 - 125		5	20
Acenaphthylene	1.00	0.458	*	ug/L	46	62 - 125		12	20
Acenaphthene	1.00	0.850		ug/L	85	63 - 125		3	20
Fluorene	1.00	0.920		ug/L	92	69 - 125		0	20
Phenanthrene	1.00	0.865		ug/L	86	70 - 125		0	20
Anthracene	1.00	0.351	*	ug/L	35	50 - 125		3	20
Fluoranthene	1.00	1.02		ug/L	102	70 - 145		2	20
Pyrene	1.00	0.928		ug/L	93	70 - 133		0	20
Benzo[a]anthracene	1.00	0.757		ug/L	76	65 - 125		0	20
Chrysene	1.00	0.904		ug/L	90	70 - 125		0	20
Benzo[a]pyrene	1.00	0.252	*	ug/L	25	45 - 125		5	20
Indeno[1,2,3-cd]pyrene	1.00	0.857		ug/L	86	70 - 136		1	20
Dibenz(a,h)anthracene	1.00	0.900		ug/L	90	69 - 154		0	20
Benzo[g,h,i]perylene	1.00	0.768		ug/L	77	65 - 153		0	20
Benzo[b]fluoranthene	1.00	0.879		ug/L	88	70 - 129		2	20
Benzo[k]fluoranthene	1.00	0.885		ug/L	89	70 - 123		2	20

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53155-1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: LCSD 580-200834/3-A

Matrix: Water

Analysis Batch: 201557

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 200834

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Terphenyl-d14	91		64 - 150

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Lab Sample ID: MB 580-201089/5

Matrix: Water

Analysis Batch: 201089

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050	0.027	mg/L			09/17/15 16:09	1
<hr/>									
<hr/>									
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89		50 - 150					09/17/15 16:09	1
Trifluorotoluene (Surr)	108		50 - 150					09/17/15 16:09	1

Lab Sample ID: LCS 580-201089/6

Matrix: Water

Analysis Batch: 201089

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.
Gasoline	1.16	1.06		mg/L		92	79 - 110
<hr/>							
<hr/>							
Surrogate	%Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene (Surr)	98		50 - 150				
Trifluorotoluene (Surr)	116		50 - 150				

Lab Sample ID: LCSD 580-201089/7

Matrix: Water

Analysis Batch: 201089

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.	RPD
Gasoline	1.16	1.02		mg/L		88	79 - 110	5
<hr/>								
<hr/>								
Surrogate	%Recovery	LCSD Qualifier	Limits					
4-Bromofluorobenzene (Surr)	96		50 - 150					
Trifluorotoluene (Surr)	110		50 - 150					

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 580-201411/1-A

Matrix: Water

Analysis Batch: 201839

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 201411

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.11	0.015	mg/L		09/22/15 11:29	09/28/15 20:56	1
Motor Oil (>C24-C36)	ND		0.25	0.0098	mg/L		09/22/15 11:29	09/28/15 20:56	1

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53155-1

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

**Lab Sample ID:** MB 580-201411/1-A

**Matrix:** Water

**Analysis Batch:** 201839

**Client Sample ID:** Method Blank

**Prep Type:** Total/NA

**Prep Batch:** 201411

Surrogate	MB	MB	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o-Terphenyl</i>			94		50 - 150	09/22/15 11:29	09/28/15 20:56	1

**Lab Sample ID:** LCS 580-201411/2-A

**Matrix:** Water

**Analysis Batch:** 201839

**Client Sample ID:** Lab Control Sample

**Prep Type:** Total/NA

**Prep Batch:** 201411

Analyte	Spike	LCS	LCS	Unit	D	%Rec.	Limits	Prepared
	Added	Result	Qualifier					
#2 Diesel (C10-C24)	0.500	0.446		mg/L	89	59 - 120		
Motor Oil (>C24-C36)	0.502	0.418		mg/L	83	71 - 140		
<i>Surrogate</i>	LCS	LCS						
<i>o-Terphenyl</i>	%Recovery	Qualifier	Limits					
	97		50 - 150					

**Lab Sample ID:** LCSD 580-201411/3-A

**Matrix:** Water

**Analysis Batch:** 201839

**Client Sample ID:** Lab Control Sample Dup

**Prep Type:** Total/NA

**Prep Batch:** 201411

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec.	Limits	Prepared	RPD	Limit
	Added	Result	Qualifier							
#2 Diesel (C10-C24)	0.500	0.441		mg/L	88	59 - 120			1	27
Motor Oil (>C24-C36)	0.502	0.418		mg/L	83	71 - 140			0	27
<i>Surrogate</i>	LCSD	LCSD								
<i>o-Terphenyl</i>	%Recovery	Qualifier	Limits							
	97		50 - 150							

## Method: 1631E - Mercury, Low Level (CVAFS)

**Lab Sample ID:** MB 240-197230/1-A

**Matrix:** Water

**Analysis Batch:** 197462

**Client Sample ID:** Method Blank

**Prep Type:** Total/NA

**Prep Batch:** 197230

Analyte	MB	MB	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury			ND		0.50	0.16	ng/L		09/11/15 15:00	09/14/15 12:56	1

**Lab Sample ID:** LCS 240-197230/2-A

**Matrix:** Water

**Analysis Batch:** 197462

**Client Sample ID:** Lab Control Sample

**Prep Type:** Total/NA

**Prep Batch:** 197230

Analyte	Spike	LCS	LCS	Unit	D	%Rec.	Limits	Prepared
	Added	Result	Qualifier					
Mercury	5.00	4.15		ng/L	83	77 - 123		

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53155-1

## Method: 6020 - Metals (ICP/MS)

**Lab Sample ID: MB 580-201350/23-A**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 201350**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	ND		0.010	0.0027	mg/L				10
Barium	0.00272	J	0.012	0.00054	mg/L				10
Cadmium	ND		0.0040	0.00028	mg/L				10
Chromium	ND		0.0040	0.0014	mg/L				10
Copper	ND		0.020	0.0060	mg/L				10
Lead	0.000573	J	0.0040	0.00034	mg/L				10
Manganese	ND		0.020	0.0035	mg/L				10
Selenium	0.00352	J	0.010	0.0030	mg/L				10
Silver	ND		0.0040	0.00030	mg/L				10
Zinc	ND		0.070	0.019	mg/L				10

**Lab Sample ID: LCS 580-201350/24-A**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 201350**

**%Rec.**

Analyte	Spike	LCS	LCS	Unit	D	%Rec	Limits	
	Added	Result	Qualifier					
Arsenic	4.00	4.03		mg/L		101	80 - 120	
Barium	4.00	4.13		mg/L		103	80 - 120	
Cadmium	0.100	0.102		mg/L		102	80 - 120	
Chromium	0.400	0.405		mg/L		101	80 - 120	
Copper	0.500	0.501		mg/L		100	80 - 120	
Lead	1.00	0.972		mg/L		97	80 - 120	
Manganese	1.00	1.01		mg/L		101	80 - 120	
Selenium	4.00	4.22		mg/L		106	80 - 120	
Silver	0.600	0.587		mg/L		98	80 - 120	
Zinc	4.00	3.99		mg/L		100	80 - 120	

**Lab Sample ID: LCSD 580-201350/25-A**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 201350**

**%Rec.**

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec	Limits	RPD	Limit
	Added	Result	Qualifier						
Arsenic	4.00	4.01		mg/L		100	80 - 120	0	20
Barium	4.00	4.09		mg/L		102	80 - 120	1	20
Cadmium	0.100	0.101		mg/L		101	80 - 120	0	20
Chromium	0.400	0.399		mg/L		100	80 - 120	1	20
Copper	0.500	0.500		mg/L		100	80 - 120	0	20
Lead	1.00	0.975		mg/L		97	80 - 120	0	20
Manganese	1.00	1.01		mg/L		101	80 - 120	0	20
Selenium	4.00	4.19		mg/L		105	80 - 120	1	20
Silver	0.600	0.590		mg/L		98	80 - 120	0	20
Zinc	4.00	4.01		mg/L		100	80 - 120	0	20

**Lab Sample ID: 580-53155-2 MS**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: B-30-RI-CHEV**

**Prep Type: Total/NA**

**Prep Batch: 201350**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier				
Arsenic	0.0045	J	4.00	4.21		mg/L		105	80 - 120

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53155-1

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: 580-53155-2 MS**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: B-30-RI-CHEV**

**Prep Type: Total/NA**

**Prep Batch: 201350**

**%Rec.**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	Limits	
	Result	Qualifier	Added	Result	Qualifier					
Barium	0.063	B	4.00	4.41		mg/L	109	80 - 120		
Cadmium	0.00086	J	0.100	0.105		mg/L	104	80 - 120		
Chromium	0.0018	J	0.400	0.434		mg/L	108	80 - 120		
Copper	0.0082	J	0.500	0.535		mg/L	105	80 - 120		
Lead	0.0015	J B	1.00	1.05		mg/L	104	80 - 120		
Manganese	5.0		1.00	6.20	4	mg/L	120	80 - 120		
Selenium	ND		4.00	4.44		mg/L	111	80 - 120		
Silver	ND		0.600	0.608		mg/L	101	80 - 120		
Zinc	0.040	J	4.00	4.25		mg/L	105	80 - 120		

**Lab Sample ID: 580-53155-2 MSD**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: B-30-RI-CHEV**

**Prep Type: Total/NA**

**Prep Batch: 201350**

**%Rec.**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier						
Arsenic	0.0045	J	4.00	4.25		mg/L	106	80 - 120	1	20	
Barium	0.063	B	4.00	4.42		mg/L	109	80 - 120	0	20	
Cadmium	0.00086	J	0.100	0.115		mg/L	114	80 - 120	9	20	
Chromium	0.0018	J	0.400	0.442		mg/L	110	80 - 120	2	20	
Copper	0.0082	J	0.500	0.536		mg/L	105	80 - 120	0	20	
Lead	0.0015	J B	1.00	1.05		mg/L	105	80 - 120	1	20	
Manganese	5.0		1.00	6.30	4	mg/L	129	80 - 120	2	20	
Selenium	ND		4.00	4.45		mg/L	111	80 - 120	0	20	
Silver	ND		0.600	0.620		mg/L	103	80 - 120	2	20	
Zinc	0.040	J	4.00	4.27		mg/L	106	80 - 120	1	20	

**Lab Sample ID: 580-53155-2 DU**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: B-30-RI-CHEV**

**Prep Type: Total/NA**

**Prep Batch: 201350**

**RPD**

Analyte	Sample	Sample	Spike	DU	DU	Unit	D			RPD	Limit
	Result	Qualifier	Added	Result	Qualifier						
Arsenic	0.0045	J		0.00454	J	mg/L				2	20
Barium	0.063	B		0.0606		mg/L				4	20
Cadmium	0.00086	J		0.00118	J F5	mg/L				32	20
Chromium	0.0018	J		0.00196	J	mg/L				10	20
Copper	0.0082	J		0.00795	J	mg/L				3	20
Lead	0.0015	J B		0.00148	J	mg/L				3	20
Manganese	5.0			4.95		mg/L				1	20
Selenium	ND			ND		mg/L				NC	20
Silver	ND			ND		mg/L				NC	20
Zinc	0.040	J		0.0409	J	mg/L				2	20

TestAmerica Seattle

# Lab Chronicle

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53155-1

## Client Sample ID: Trip Blanks

Date Collected: 09/08/15 00:00

Date Received: 09/09/15 11:10

## Lab Sample ID: 580-53155-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	201150	09/18/15 14:27	K1K	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	201089	09/17/15 19:28	CJ	TAL SEA

## Client Sample ID: B-30-RI-CHEV

Date Collected: 09/08/15 10:40

Date Received: 09/09/15 11:10

## Lab Sample ID: 580-53155-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	201150	09/18/15 15:22	K1K	TAL SEA
Total/NA	Prep	3520C			200834	09/15/15 16:36	ERZ	TAL SEA
Total/NA	Analysis	8270C SIM		1	201557	09/23/15 21:53	ERZ	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	201089	09/18/15 00:26	CJ	TAL SEA
Total/NA	Prep	3510C			201411	09/22/15 11:29	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	201839	09/28/15 22:08	KW	TAL SEA
Total/NA	Prep	1631E			197230	09/11/15 15:00	DNS	TAL CAN
Total/NA	Analysis	1631E		10	197462	09/14/15 14:16	AMM2	TAL CAN
Total/NA	Prep	3010A			201350	09/21/15 17:30	PAB	TAL SEA
Total/NA	Analysis	6020		10	201490	09/23/15 02:32	FCW	TAL SEA

## Client Sample ID: B-29-RI-CHEV

Date Collected: 09/08/15 11:20

Date Received: 09/09/15 11:10

## Lab Sample ID: 580-53155-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	201150	09/18/15 15:50	K1K	TAL SEA
Total/NA	Prep	3520C			200834	09/15/15 16:36	ERZ	TAL SEA
Total/NA	Analysis	8270C SIM		1	201557	09/23/15 22:27	ERZ	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	201089	09/18/15 00:59	CJ	TAL SEA
Total/NA	Prep	3510C			201411	09/22/15 11:29	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	201839	09/28/15 22:26	KW	TAL SEA
Total/NA	Prep	1631E			197230	09/11/15 15:00	DNS	TAL CAN
Total/NA	Analysis	1631E		10	197462	09/14/15 14:20	AMM2	TAL CAN
Total/NA	Prep	3010A			201350	09/21/15 17:30	PAB	TAL SEA
Total/NA	Analysis	6020		10	201490	09/23/15 03:04	FCW	TAL SEA

## Client Sample ID: B-28-RI-CHEV

Date Collected: 09/08/15 13:00

Date Received: 09/09/15 11:10

## Lab Sample ID: 580-53155-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	201150	09/18/15 16:17	K1K	TAL SEA
Total/NA	Analysis	8260B	RA	1	202129	09/30/15 19:12	TL1	TAL SEA

TestAmerica Seattle

# Lab Chronicle

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53155-1

**Client Sample ID: B-28-RI-CHEV**

Date Collected: 09/08/15 13:00

Date Received: 09/09/15 11:10

**Lab Sample ID: 580-53155-4**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3520C			200834	09/15/15 16:36	ERZ	TAL SEA
Total/NA	Analysis	8270C SIM		1	201557	09/23/15 23:00	ERZ	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	201089	09/18/15 02:06	CJ	TAL SEA
Total/NA	Prep	3510C			201411	09/22/15 11:29	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	201839	09/28/15 22:44	KW	TAL SEA
Total/NA	Prep	1631E			197230	09/11/15 15:00	DNS	TAL CAN
Total/NA	Analysis	1631E		10	197462	09/14/15 14:24	AMM2	TAL CAN
Total/NA	Prep	3010A			201350	09/21/15 17:30	PAB	TAL SEA
Total/NA	Analysis	6020		10	201490	09/23/15 03:09	FCW	TAL SEA

**Client Sample ID: BD-RI-CHEV-1**

Date Collected: 09/08/15 00:00

Date Received: 09/09/15 11:10

**Lab Sample ID: 580-53155-5**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	201150	09/18/15 16:45	K1K	TAL SEA
Total/NA	Analysis	8260B	RA	1	202129	09/30/15 19:39	TL1	TAL SEA
Total/NA	Prep	3520C			200834	09/15/15 16:36	ERZ	TAL SEA
Total/NA	Analysis	8270C SIM		1	201557	09/23/15 23:33	ERZ	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	201089	09/18/15 02:39	CJ	TAL SEA
Total/NA	Prep	3510C			201411	09/22/15 11:29	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	201839	09/28/15 23:02	KW	TAL SEA
Total/NA	Prep	1631E			197230	09/11/15 15:00	DNS	TAL CAN
Total/NA	Analysis	1631E		10	197462	09/14/15 14:27	AMM2	TAL CAN
Total/NA	Prep	3010A			201350	09/21/15 17:30	PAB	TAL SEA
Total/NA	Analysis	6020		10	201490	09/23/15 03:13	FCW	TAL SEA

## Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

TestAmerica Seattle

# Certification Summary

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53155-1

## Laboratory: TestAmerica Seattle

Unless otherwise noted, all analytes for this laboratory were covered under each certification below.

Authority	Program	EPA Region	Certification ID	Expiration Date
Oregon	NELAP	10	WA100007	11-06-15
The following analytes are included in this report, but certification is not offered by the governing authority:				
Analysis Method	Prep Method	Matrix	Analyte	
8270C SIM	3520C	Water	Pyrene	

## Laboratory: TestAmerica Canton

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	NELAP	9	01144CA	06-30-14 *
California	State Program	9	2927	04-30-17
Connecticut	State Program	1	PH-0590	12-31-15
Illinois	NELAP	5	200004	07-31-16
Kansas	NELAP	7	E-10336	01-31-16 *
Kentucky (UST)	State Program	4	58	02-26-16
Kentucky (WW)	State Program	4	98016	12-31-15
L-A-B	DoD ELAP		L2315	07-18-16
Minnesota	NELAP	5	039-999-348	12-31-15
Nevada	State Program	9	OH-000482008A	07-31-16
New Jersey	NELAP	2	OH001	10-30-15 *
New York	NELAP	2	10975	03-31-16
Ohio VAP	State Program	5	CL0024	10-31-15 *
Oregon	NELAP	10	4062	02-23-16
Pennsylvania	NELAP	3	68-00340	08-31-16
Texas	NELAP	6	T104704517-15-5	08-31-16
USDA	Federal		P330-13-00319	11-26-16
Virginia	NELAP	3	460175	09-14-16
Washington	State Program	10	C971	01-12-16
West Virginia DEP	State Program	3	210	12-31-15
Wisconsin	State Program	5	999518190	08-31-16

\* Certification renewal pending - certification considered valid.

## Sample Summary

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53155-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-53155-1	Trip Blanks	Water	09/08/15 00:00	09/09/15 11:10
580-53155-2	B-30-RI-CHEV	Water	09/08/15 10:40	09/09/15 11:10
580-53155-3	B-29-RI-CHEV	Water	09/08/15 11:20	09/09/15 11:10
580-53155-4	B-28-RI-CHEV	Water	09/08/15 13:00	09/09/15 11:10
580-53155-5	BD-RI-CHEV-1	Water	09/08/15 00:00	09/09/15 11:10

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TestAmerica Seattle

Beaverton, OR 97008  
Phone: 503.906.9200

580-53155 Chain of Custody

## Chain of Custody Record

090102

Te America

THE LEADER IN ENVIRONMENTAL TESTING  
TestAmerica Laboratories, Inc.

TAL-8210 (0713)

10/4/2015

 DW  NPDES  RCRA  Other:

Client Contact		Project Manager: LYNN FENWICK		Site Contact: BRIAN FENWICK		Date: 09/08/15	COC No:
Company Name: ARCADIS		Tel/Fax: 503.220.8201 x1114		Lab Contact: SARAH MURPHY		Carrier:	1 of 1 COCs
Address: 11 SW COLUMBIA ST STE 670		Analysis Turnaround Time					
City/State/Zip: PORTLAND, OR 97201		<input type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS					
Phone: 503.220.8201 ext		TAT if different from Below					
Fax:		<input checked="" type="checkbox"/> 2 weeks					
Project Name: 3Q2015 WILLBROOK GWM		<input type="checkbox"/> 1 week					
Site: 1001868		<input type="checkbox"/> 2 days					
P O # 340452.0015.001420		<input type="checkbox"/> 1 day					
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)
							Perform MS/MSD (Y/N)
							BIGEX NTBSE
							ANALYTIC - Gx
							ANALYTIC - Dx
							TOTAL METALS X
							DISSOLVED METALS X
							CYANIDE
							TSC
							MERCURY (Chloride)
Sample Specific Notes:							
TRIP BLANKS 3-30-R1-CHEV B-29-R1-CHEV B-28-R1-CHEV BD-R1-CHEV-1							
Preservation Used: 0=Ice / 2=HCl / 3=H2SO4 / 4=HNO3 / 5=NaOH / 6=Other							
Possible Hazard Identification:				Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)			
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.				<input checked="" type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Disposal by Lab <input type="checkbox"/> Archive for _____ Months			
<input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown							
Special Instructions/QC Requirements & Comments: *RCRA 8, Cu/Zn ** TIC 2-methylpropylamine AND CHRIS.DOTSUNG@ARCADIS-US.COM							
PLEASE SEND REPORT TO: BRIAN.FENWICK@ARCADIS-US.COM AND PAROLAN.MARQUIN@ARCADIS-US.COM							
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temp. (°C): Obs'd: _____		Corr'd: _____	Therm ID No.: _____
Relinquished by: Meg Armstrong		Company: ARCADIS		Date/Time: 9/9/15 10:25		Received by: <i>M. E. -</i>	Company: M - E.
Relinquished by: <i>Meg Armstrong</i>		Company: M - E.		Date/Time: 9/9/15 11:00		Received by: <i>TAP</i>	Company: TAP
Relinquished by: <i>Jordan M</i>		Company: TAP		Date/Time: 9/9/15 17:00		Received in Laboratory by: <i>Bob Grey</i>	Company: TA-S24

2116102 0.9/0.4  
 182 103 1.4/2.112 1 cooler 1  
 06,1.2, 05,1.0 1R/G-L

## Login Sample Receipt Checklist

Client: ARCADIS U.S. Inc

Job Number: 580-53155-1

**Login Number:** 53155

**List Source:** TestAmerica Seattle

**List Number:** 1

**Creator:** Svabik-Seror, Philip M

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Seattle

5755 8th Street East

Tacoma, WA 98424

Tel: (253)922-2310

TestAmerica Job ID: 580-53199-1

Client Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

For:

ARCADIS U.S. Inc

111 SW Columbia Street

Suite 670

Portland, Oregon 97201

Attn: Brian Marcum



Authorized for release by:

10/13/2015 4:41:53 PM

Sarah Murphy, Project Manager I

(253)922-2310

[sarah.murphy@testamericainc.com](mailto:sarah.murphy@testamericainc.com)

### LINKS

Review your project  
results through

Total Access

Have a Question?

Ask  
The  
Expert

Visit us at:

[www.testamericainc.com](http://www.testamericainc.com)

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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# Case Narrative

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53199-1

## Job ID: 580-53199-1

### Laboratory: TestAmerica Seattle

#### Narrative

##### Job Narrative 580-53199-1

#### Receipt

The samples were received on 9/10/2015 11:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.7° C and 1.8° C.

#### GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### GC/MS Semi VOA

Method(s) 8270C SIM: The following analyte(s) recovered outside control limits for the LCS/LCSD associated with preparation batch 580-200834 and 580-200834 and analytical batch 580-201557: Anthracene, Acenaphthylene and Benzo[a]pyrene. These analytes were outside the Marginal Exceedance Limits and/or were indicative of a systematic problem; therefore, re-extraction and/or re-analysis was performed. Re-analysis yielded little or no improvement in QC results (AB 202733); therefore, original set of data have been qualified and reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### GC Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Definitions/Glossary

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53199-1

## Qualifiers

### GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.

### Metals

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

## Glossary

### Abbreviation These commonly used abbreviations may or may not be present in this report.

□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

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# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53199-1

**Client Sample ID: B-10-RI-CHEV**

Date Collected: 09/09/15 15:10

Date Received: 09/10/15 11:40

**Lab Sample ID: 580-53199-1**

Matrix: Water

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			09/19/15 22:51	1
Ethylbenzene	ND		3.0		ug/L			09/19/15 22:51	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/19/15 22:51	1
m-Xylene & p-Xylene	ND		3.0		ug/L			09/19/15 22:51	1
o-Xylene	ND		2.0		ug/L			09/19/15 22:51	1
Toluene	ND		2.0		ug/L			09/19/15 22:51	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	105			75 - 120				09/19/15 22:51	1
Dibromofluoromethane (Surr)	102			85 - 115				09/19/15 22:51	1
1,2-Dichloroethane-d4 (Surr)	104			70 - 120				09/19/15 22:51	1
Toluene-d8 (Surr)	97			85 - 120				09/19/15 22:51	1
Trifluorotoluene (Surr)	99			70 - 136				09/19/15 22:51	1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	0.18		0.011		ug/L		09/15/15 16:36	09/23/15 21:19	1
2-Methylnaphthalene	ND		0.014		ug/L		09/15/15 16:36	09/23/15 21:19	1
1-Methylnaphthalene	0.47		0.011		ug/L		09/15/15 16:36	09/23/15 21:19	1
Acenaphthylene	0.041 *		0.011		ug/L		09/15/15 16:36	09/23/15 21:19	1
Acenaphthene	0.50		0.011		ug/L		09/15/15 16:36	09/23/15 21:19	1
Fluorene	0.56		0.011		ug/L		09/15/15 16:36	09/23/15 21:19	1
Phenanthrene	ND		0.11		ug/L		09/15/15 16:36	09/23/15 21:19	1
Anthracene	ND *		0.028		ug/L		09/15/15 16:36	09/23/15 21:19	1
Fluoranthene	0.22		0.056		ug/L		09/15/15 16:36	09/23/15 21:19	1
Pyrene	0.26		0.056		ug/L		09/15/15 16:36	09/23/15 21:19	1
Benzo[a]anthracene	ND		0.011		ug/L		09/15/15 16:36	09/23/15 21:19	1
Chrysene	ND		0.011		ug/L		09/15/15 16:36	09/23/15 21:19	1
Benzo[a]pyrene	ND *		0.011		ug/L		09/15/15 16:36	09/23/15 21:19	1
Indeno[1,2,3-cd]pyrene	ND		0.011		ug/L		09/15/15 16:36	09/23/15 21:19	1
Dibenz(a,h)anthracene	ND		0.011		ug/L		09/15/15 16:36	09/23/15 21:19	1
Benzo[g,h,i]perylene	ND		0.011		ug/L		09/15/15 16:36	09/23/15 21:19	1
Benzo[b]fluoranthene	ND		0.011		ug/L		09/15/15 16:36	09/23/15 21:19	1
Benzo[k]fluoranthene	ND		0.011		ug/L		09/15/15 16:36	09/23/15 21:19	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Terphenyl-d14	87			64 - 150				09/15/15 16:36	09/23/15 21:19

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	0.66		0.050		mg/L			09/22/15 20:02	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	107			50 - 150				09/22/15 20:02	1
Trifluorotoluene (Surr)	106			50 - 150				09/22/15 20:02	1

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	4.6		0.12		mg/L		09/22/15 11:29	10/12/15 11:09	1
Motor Oil (>C24-C36)	1.3		0.27		mg/L		09/22/15 11:29	10/12/15 11:09	1

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53199-1

**Client Sample ID: B-10-RI-CHEV**

**Date Collected: 09/09/15 15:10**

**Date Received: 09/10/15 11:40**

**Lab Sample ID: 580-53199-1**

**Matrix: Water**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o-Terphenyl</i>	130		50 - 150	09/22/15 11:29	10/12/15 11:09	1

**Method: 1631E - Mercury, Low Level (CVAFS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	3.3		0.50		ng/L	D	09/16/15 16:00	09/17/15 17:02	1

**Method: 6020 - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.040		0.010		mg/L		09/21/15 17:30	09/23/15 04:04	10
Barium	0.092		0.012		mg/L		09/21/15 17:30	09/23/15 04:04	10
Cadmium	ND		0.0040		mg/L		09/21/15 17:30	09/23/15 04:04	10
Chromium	0.0042		0.0040		mg/L		09/21/15 17:30	09/23/15 04:04	10
Copper	ND		0.020		mg/L		09/21/15 17:30	09/23/15 04:04	10
Lead	ND		0.0040		mg/L		09/21/15 17:30	09/23/15 04:04	10
Manganese	4.0		0.020		mg/L		09/21/15 17:30	09/23/15 04:04	10
Selenium	ND		0.010		mg/L		09/21/15 17:30	09/23/15 04:04	10
Silver	ND		0.0040		mg/L		09/21/15 17:30	09/23/15 04:04	10
Zinc	ND		0.070		mg/L		09/21/15 17:30	09/23/15 04:04	10

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53199-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 580-201253/4**

**Matrix: Water**

**Analysis Batch: 201253**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		2.0		ug/L			09/19/15 14:51	1
Ethylbenzene	ND		3.0		ug/L			09/19/15 14:51	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/19/15 14:51	1
m-Xylene & p-Xylene	ND		3.0		ug/L			09/19/15 14:51	1
o-Xylene	ND		2.0		ug/L			09/19/15 14:51	1
Toluene	ND		2.0		ug/L			09/19/15 14:51	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	104		75 - 120		09/19/15 14:51	1
Dibromofluoromethane (Surr)	98		85 - 115		09/19/15 14:51	1
1,2-Dichloroethane-d4 (Surr)	97		70 - 120		09/19/15 14:51	1
Toluene-d8 (Surr)	98		85 - 120		09/19/15 14:51	1
Trifluorotoluene (Surr)	105		70 - 136		09/19/15 14:51	1

**Lab Sample ID: LCS 580-201253/5**

**Matrix: Water**

**Analysis Batch: 201253**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike	LCS	LCS	D	%Rec	%Rec.	Limits
	Added	Result	Qualifier				
Benzene	20.1	19.1		ug/L	95	80 - 120	
Ethylbenzene	20.1	18.5		ug/L	92	75 - 125	
Methyl tert-butyl ether	20.0	22.1		ug/L	110	65 - 125	
m-Xylene & p-Xylene	20.0	19.8		ug/L	99	75 - 130	
o-Xylene	20.0	19.9		ug/L	99	80 - 120	
Toluene	20.0	18.8		ug/L	94	75 - 120	

Surrogate	LCS	LCS	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	105		75 - 120			
Dibromofluoromethane (Surr)	101		85 - 115			
1,2-Dichloroethane-d4 (Surr)	104		70 - 120			
Toluene-d8 (Surr)	94		85 - 120			
Trifluorotoluene (Surr)	102		70 - 136			

**Lab Sample ID: LCSD 580-201253/6**

**Matrix: Water**

**Analysis Batch: 201253**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike	LCSD	LCSD	D	%Rec	%Rec.	RPD	RPD Limit
	Added	Result	Qualifier					
Benzene	20.1	18.7		ug/L	93	80 - 120	2	30
Ethylbenzene	20.1	18.6		ug/L	93	75 - 125	0	30
Methyl tert-butyl ether	20.0	19.5		ug/L	97	65 - 125	13	30
m-Xylene & p-Xylene	20.0	19.8		ug/L	99	75 - 130	0	30
o-Xylene	20.0	19.5		ug/L	97	80 - 120	2	30
Toluene	20.0	18.5		ug/L	92	75 - 120	1	30

Surrogate	LCSD	LCSD	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	105		75 - 120			

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53199-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID:** LCSD 580-201253/6

**Matrix:** Water

**Analysis Batch:** 201253

**Client Sample ID:** Lab Control Sample Dup

**Prep Type:** Total/NA

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Dibromofluoromethane (Surr)	99		85 - 115
1,2-Dichloroethane-d4 (Surr)	97		70 - 120
Toluene-d8 (Surr)	96		85 - 120
Trifluorotoluene (Surr)	104		70 - 136

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

**Lab Sample ID:** MB 580-200834/1-A

**Matrix:** Water

**Analysis Batch:** 201557

**Client Sample ID:** Method Blank

**Prep Type:** Total/NA

**Prep Batch:** 200834

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	MB	MB	MB	MB	MB		MB	MB	
Naphthalene	ND		0.010		ug/L	09/15/15 16:36	09/23/15 18:04		1
2-Methylnaphthalene	ND		0.013		ug/L	09/15/15 16:36	09/23/15 18:04		1
1-Methylnaphthalene	ND		0.010		ug/L	09/15/15 16:36	09/23/15 18:04		1
Acenaphthylene	ND		0.010		ug/L	09/15/15 16:36	09/23/15 18:04		1
Acenaphthene	ND		0.010		ug/L	09/15/15 16:36	09/23/15 18:04		1
Fluorene	ND		0.010		ug/L	09/15/15 16:36	09/23/15 18:04		1
Phenanthrene	ND		0.10		ug/L	09/15/15 16:36	09/23/15 18:04		1
Anthracene	ND		0.025		ug/L	09/15/15 16:36	09/23/15 18:04		1
Fluoranthene	ND		0.050		ug/L	09/15/15 16:36	09/23/15 18:04		1
Pyrene	ND		0.050		ug/L	09/15/15 16:36	09/23/15 18:04		1
Benzo[a]anthracene	ND		0.010		ug/L	09/15/15 16:36	09/23/15 18:04		1
Chrysene	ND		0.010		ug/L	09/15/15 16:36	09/23/15 18:04		1
Benzo[a]pyrene	ND		0.010		ug/L	09/15/15 16:36	09/23/15 18:04		1
Indeno[1,2,3-cd]pyrene	ND		0.010		ug/L	09/15/15 16:36	09/23/15 18:04		1
Dibenz(a,h)anthracene	ND		0.010		ug/L	09/15/15 16:36	09/23/15 18:04		1
Benzo[g,h,i]perylene	ND		0.010		ug/L	09/15/15 16:36	09/23/15 18:04		1
Benzo[b]fluoranthene	ND		0.010		ug/L	09/15/15 16:36	09/23/15 18:04		1
Benzo[k]fluoranthene	ND		0.010		ug/L	09/15/15 16:36	09/23/15 18:04		1
Surrogate	MB %Recovery	MB Qualifier	MB Limits			Prepared	Analyzed	Dil Fac	
Terphenyl-d14	79		64 - 150			09/15/15 16:36	09/23/15 18:04		1

**Lab Sample ID:** LCS 580-200834/2-A

**Matrix:** Water

**Analysis Batch:** 201557

**Client Sample ID:** Lab Control Sample

**Prep Type:** Total/NA

**Prep Batch:** 200834

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits	%Rec.
	Added	Result	Qualifier	Unit				
Naphthalene	1.00	0.832		ug/L	83	56 - 125		
2-Methylnaphthalene	1.00	0.879		ug/L	88	56 - 125		
1-Methylnaphthalene	1.00	0.889		ug/L	89	54 - 125		
Acenaphthylene	1.00	0.514	*	ug/L	51	62 - 125		
Acenaphthene	1.00	0.872		ug/L	87	63 - 125		
Fluorene	1.00	0.923		ug/L	92	69 - 125		
Phenanthrene	1.00	0.866		ug/L	87	70 - 125		
Anthracene	1.00	0.341	*	ug/L	34	50 - 125		

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53199-1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

**Lab Sample ID: LCS 580-200834/2-A**

**Matrix: Water**

**Analysis Batch: 201557**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 200834**

**%Rec.**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits	
Fluoranthene	1.00	1.00		ug/L	100	70 - 145		
Pyrene	1.00	0.926		ug/L	93	70 - 133		
Benzo[a]anthracene	1.00	0.753		ug/L	75	65 - 125		
Chrysene	1.00	0.906		ug/L	91	70 - 125		
Benzo[a]pyrene	1.00	0.239 *		ug/L	24	45 - 125		
Indeno[1,2,3-cd]pyrene	1.00	0.862		ug/L	86	70 - 136		
Dibenz(a,h)anthracene	1.00	0.896		ug/L	90	69 - 154		
Benzo[g,h,i]perylene	1.00	0.769		ug/L	77	65 - 153		
Benzo[b]fluoranthene	1.00	0.859		ug/L	86	70 - 129		
Benzo[k]fluoranthene	1.00	0.905		ug/L	90	70 - 123		
<b>Surrogate</b>		<b>LCS %Recovery</b>	<b>LCS Qualifier</b>	<b>Limits</b>				
Terphenyl-d14	91			64 - 150				

**Lab Sample ID: LCSD 580-200834/3-A**

**Matrix: Water**

**Analysis Batch: 201557**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 200834**

**%Rec.**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Naphthalene	1.00	0.812		ug/L	81	56 - 125		2	20
2-Methylnaphthalene	1.00	0.845		ug/L	85	56 - 125		4	20
1-Methylnaphthalene	1.00	0.847		ug/L	85	54 - 125		5	20
Acenaphthylene	1.00	0.458 *		ug/L	46	62 - 125		12	20
Acenaphthene	1.00	0.850		ug/L	85	63 - 125		3	20
Fluorene	1.00	0.920		ug/L	92	69 - 125		0	20
Phenanthrene	1.00	0.865		ug/L	86	70 - 125		0	20
Anthracene	1.00	0.351 *		ug/L	35	50 - 125		3	20
Fluoranthene	1.00	1.02		ug/L	102	70 - 145		2	20
Pyrene	1.00	0.928		ug/L	93	70 - 133		0	20
Benzo[a]anthracene	1.00	0.757		ug/L	76	65 - 125		0	20
Chrysene	1.00	0.904		ug/L	90	70 - 125		0	20
Benzo[a]pyrene	1.00	0.252 *		ug/L	25	45 - 125		5	20
Indeno[1,2,3-cd]pyrene	1.00	0.857		ug/L	86	70 - 136		1	20
Dibenz(a,h)anthracene	1.00	0.900		ug/L	90	69 - 154		0	20
Benzo[g,h,i]perylene	1.00	0.768		ug/L	77	65 - 153		0	20
Benzo[b]fluoranthene	1.00	0.879		ug/L	88	70 - 129		2	20
Benzo[k]fluoranthene	1.00	0.885		ug/L	89	70 - 123		2	20
<b>Surrogate</b>		<b>LCSD %Recovery</b>	<b>LCSD Qualifier</b>	<b>Limits</b>					
Terphenyl-d14	91			64 - 150					

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53199-1

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

**Lab Sample ID: MB 580-201455/5**

**Matrix: Water**

**Analysis Batch: 201455**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050		mg/L			09/22/15 16:42	1
<hr/>									
<b>Surrogate</b>									
4-Bromofluorobenzene (Surr)	92		50 - 150				Prepared	09/22/15 16:42	1
Trifluorotoluene (Surr)	108		50 - 150					09/22/15 16:42	1

**Lab Sample ID: LCS 580-201455/6**

**Matrix: Water**

**Analysis Batch: 201455**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte		Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	%Rec. Limits
Gasoline		1.16	1.07		mg/L		92	79 - 110
<hr/>								
<b>Surrogate</b>								
4-Bromofluorobenzene (Surr)	98		50 - 150					
Trifluorotoluene (Surr)	113		50 - 150					

**Lab Sample ID: LCSD 580-201455/7**

**Matrix: Water**

**Analysis Batch: 201455**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte		Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec.	RPD	RPD Limit
Gasoline		1.16	1.09		mg/L		94	79 - 110	2
<hr/>									
<b>Surrogate</b>									
4-Bromofluorobenzene (Surr)	97		50 - 150						
Trifluorotoluene (Surr)	115		50 - 150						

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

**Lab Sample ID: MB 580-201411/1-A**

**Matrix: Water**

**Analysis Batch: 201839**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 201411**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.11		mg/L		09/22/15 11:29	09/28/15 20:56	1
Motor Oil (>C24-C36)	ND		0.25		mg/L		09/22/15 11:29	09/28/15 20:56	1
<hr/>									
<b>Surrogate</b>									
o-Terphenyl	94		50 - 150				Prepared	09/22/15 11:29	09/28/15 20:56

**Lab Sample ID: LCS 580-201411/2-A**

**Matrix: Water**

**Analysis Batch: 201839**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 201411**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	RPD
#2 Diesel (C10-C24)	0.500	0.446		mg/L		89	59 - 120

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53199-1

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

**Lab Sample ID: LCS 580-201411/2-A**

**Matrix: Water**

**Analysis Batch: 201839**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 201411**

**%Rec.**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Motor Oil (>C24-C36)	0.502	0.418		mg/L		83	71 - 140
<b>Surrogate</b>							
<i>o-Terphenyl</i>	97						
		50 - 150					

**Lab Sample ID: LCSD 580-201411/3-A**

**Matrix: Water**

**Analysis Batch: 201839**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 201411**

**%Rec.**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
#2 Diesel (C10-C24)	0.500	0.441		mg/L		88	59 - 120	1	27
Motor Oil (>C24-C36)	0.502	0.418		mg/L		83	71 - 140	0	27
<b>Surrogate</b>									
<i>o-Terphenyl</i>	97								
		50 - 150							

## Method: 1631E - Mercury, Low Level (CVAFS)

**Lab Sample ID: MB 240-197838/1-A**

**Matrix: Water**

**Analysis Batch: 198194**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 197838**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.50		ng/L		09/16/15 16:00	09/17/15 16:43	1

**Lab Sample ID: LCS 240-197838/2-A**

**Matrix: Water**

**Analysis Batch: 198194**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 197838**

**%Rec.**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Mercury	5.00	4.50		ng/L		90	77 - 123

**Lab Sample ID: 240-55294-B-4-A MS**

**Matrix: Water**

**Analysis Batch: 198194**

**Client Sample ID: Matrix Spike**

**Prep Type: Total/NA**

**Prep Batch: 197838**

**%Rec.**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Mercury	ND	F1	5.00	2.24	F1	ng/L		45	71 - 125

**Lab Sample ID: 240-55294-B-4-B MSD**

**Matrix: Water**

**Analysis Batch: 198194**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total/NA**

**Prep Batch: 197838**

**%Rec.**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	RPD	Limit	
Mercury	ND	F1	5.00	2.33	F1	ng/L		47	71 - 125	4	24

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53199-1

## Method: 6020 - Metals (ICP/MS)

**Lab Sample ID: MB 580-201350/23-A**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 201350**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.010	mg/L		09/21/15 17:30	09/23/15 02:14		10
Barium	ND		0.012	mg/L		09/21/15 17:30	09/23/15 02:14		10
Cadmium	ND		0.0040	mg/L		09/21/15 17:30	09/23/15 02:14		10
Chromium	ND		0.0040	mg/L		09/21/15 17:30	09/23/15 02:14		10
Copper	ND		0.020	mg/L		09/21/15 17:30	09/23/15 02:14		10
Lead	ND		0.0040	mg/L		09/21/15 17:30	09/23/15 02:14		10
Manganese	ND		0.020	mg/L		09/21/15 17:30	09/23/15 02:14		10
Selenium	ND		0.010	mg/L		09/21/15 17:30	09/23/15 02:14		10
Silver	ND		0.0040	mg/L		09/21/15 17:30	09/23/15 02:14		10
Zinc	ND		0.070	mg/L		09/21/15 17:30	09/23/15 02:14		10

**Lab Sample ID: LCS 580-201350/24-A**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 201350**

**%Rec.**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Arsenic	4.00	4.03		mg/L		101	80 - 120
Barium	4.00	4.13		mg/L		103	80 - 120
Cadmium	0.100	0.102		mg/L		102	80 - 120
Chromium	0.400	0.405		mg/L		101	80 - 120
Copper	0.500	0.501		mg/L		100	80 - 120
Lead	1.00	0.972		mg/L		97	80 - 120
Manganese	1.00	1.01		mg/L		101	80 - 120
Selenium	4.00	4.22		mg/L		106	80 - 120
Silver	0.600	0.587		mg/L		98	80 - 120
Zinc	4.00	3.99		mg/L		100	80 - 120

**Lab Sample ID: LCSD 580-201350/25-A**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 201350**

**%Rec.**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	4.00	4.01		mg/L		100	80 - 120	0	20
Barium	4.00	4.09		mg/L		102	80 - 120	1	20
Cadmium	0.100	0.101		mg/L		101	80 - 120	0	20
Chromium	0.400	0.399		mg/L		100	80 - 120	1	20
Copper	0.500	0.500		mg/L		100	80 - 120	0	20
Lead	1.00	0.975		mg/L		97	80 - 120	0	20
Manganese	1.00	1.01		mg/L		101	80 - 120	0	20
Selenium	4.00	4.19		mg/L		105	80 - 120	1	20
Silver	0.600	0.590		mg/L		98	80 - 120	0	20
Zinc	4.00	4.01		mg/L		100	80 - 120	0	20

**Lab Sample ID: 580-53155-D-2-C MS**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: Matrix Spike**

**Prep Type: Total/NA**

**Prep Batch: 201350**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Arsenic	ND		4.00	4.21		mg/L		105	80 - 120

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53199-1

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: 580-53155-D-2-C MS**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: Matrix Spike**

**Prep Type: Total/NA**

**Prep Batch: 201350**

**%Rec.**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	Limits		
	Result	Qualifier	Added	Result	Qualifier						
Barium	0.063		4.00	4.41		mg/L		109	80 - 120		
Cadmium	ND		0.100	0.105		mg/L		104	80 - 120		
Chromium	ND		0.400	0.434		mg/L		108	80 - 120		
Copper	ND		0.500	0.535		mg/L		105	80 - 120		
Lead	ND		1.00	1.05		mg/L		104	80 - 120		
Manganese	5.0		1.00	6.20	4	mg/L		120	80 - 120		
Selenium	ND		4.00	4.44		mg/L		111	80 - 120		
Silver	ND		0.600	0.608		mg/L		101	80 - 120		
Zinc	ND		4.00	4.25		mg/L		105	80 - 120		

**Lab Sample ID: 580-53155-D-2-D MSD**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total/NA**

**Prep Batch: 201350**

**%Rec.**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier						
Arsenic	ND		4.00	4.25		mg/L		106	80 - 120	1	20
Barium	0.063		4.00	4.42		mg/L		109	80 - 120	0	20
Cadmium	ND		0.100	0.115		mg/L		114	80 - 120	9	20
Chromium	ND		0.400	0.442		mg/L		110	80 - 120	2	20
Copper	ND		0.500	0.536		mg/L		105	80 - 120	0	20
Lead	ND		1.00	1.05		mg/L		105	80 - 120	1	20
Manganese	5.0		1.00	6.30	4	mg/L		129	80 - 120	2	20
Selenium	ND		4.00	4.45		mg/L		111	80 - 120	0	20
Silver	ND		0.600	0.620		mg/L		103	80 - 120	2	20
Zinc	ND		4.00	4.27		mg/L		106	80 - 120	1	20

**Lab Sample ID: 580-53155-D-2-B DU**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: Duplicate**

**Prep Type: Total/NA**

**Prep Batch: 201350**

**RPD**

Analyte	Sample	Sample		DU	DU	Unit	D			RPD	Limit
	Result	Qualifier		Result	Qualifier						
Arsenic	ND			ND		mg/L				NC	20
Barium	0.063			0.0606		mg/L				4	20
Cadmium	ND			ND		mg/L				NC	20
Chromium	ND			ND		mg/L				NC	20
Copper	ND			ND		mg/L				NC	20
Lead	ND			ND		mg/L				NC	20
Manganese	5.0			4.95		mg/L				1	20
Selenium	ND			ND		mg/L				NC	20
Silver	ND			ND		mg/L				NC	20
Zinc	ND			ND		mg/L				NC	20

# Lab Chronicle

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53199-1

**Client Sample ID: B-10-RI-CHEV**

**Lab Sample ID: 580-53199-1**

**Matrix: Water**

**Date Collected: 09/09/15 15:10**

**Date Received: 09/10/15 11:40**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	201253	09/19/15 22:51	K1K	TAL SEA
Total/NA	Prep	3520C			200834	09/15/15 16:36	ERZ	TAL SEA
Total/NA	Analysis	8270C SIM		1	201557	09/23/15 21:19	ERZ	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	201455	09/22/15 20:02	D1R	TAL SEA
Total/NA	Prep	3510C			201411	09/22/15 11:29	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	203052	10/12/15 11:09	NMI	TAL SEA
Total/NA	Prep	1631E			197838	09/16/15 16:00	DNS	TAL CAN
Total/NA	Analysis	1631E		1	198194	09/17/15 17:02	DSH	TAL CAN
Total/NA	Prep	3010A			201350	09/21/15 17:30	PAB	TAL SEA
Total/NA	Analysis	6020		10	201490	09/23/15 04:04	FCW	TAL SEA

**Laboratory References:**

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

TestAmerica Seattle

# Certification Summary

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53199-1

## Laboratory: TestAmerica Seattle

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-022	03-02-16
California	State Program	9	2901	01-31-17
L-A-B	DoD ELAP		L2236	01-19-16
L-A-B	ISO/IEC 17025		L2236	01-19-16
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-06-15
US Fish & Wildlife	Federal		LE058448-0	02-28-16
USDA	Federal		P330-14-00126	04-08-17
Washington	State Program	10	C553	02-17-16

## Laboratory: TestAmerica Canton

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	NELAP	9	01144CA	06-30-14 *
California	State Program	9	2927	04-30-17
Connecticut	State Program	1	PH-0590	12-31-15
Illinois	NELAP	5	200004	07-31-16
Kansas	NELAP	7	E-10336	01-31-16 *
Kentucky (UST)	State Program	4	58	02-26-16
Kentucky (WW)	State Program	4	98016	12-31-15
L-A-B	DoD ELAP		L2315	07-18-16
Minnesota	NELAP	5	039-999-348	12-31-15
Nevada	State Program	9	OH-000482008A	07-31-16
New Jersey	NELAP	2	OH001	10-30-15 *
New York	NELAP	2	10975	03-31-16
Ohio VAP	State Program	5	CL0024	10-31-15 *
Oregon	NELAP	10	4062	02-23-16
Pennsylvania	NELAP	3	68-00340	08-31-16
Texas	NELAP	6	T104704517-15-5	08-31-16
USDA	Federal		P330-13-00319	11-26-16
Virginia	NELAP	3	460175	09-14-16
Washington	State Program	10	C971	01-12-16
West Virginia DEP	State Program	3	210	12-31-15
Wisconsin	State Program	5	999518190	08-31-16

\* Certification renewal pending - certification considered valid.

## Sample Summary

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53199-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-53199-1	B-10-RI-CHEV	Water	09/09/15 15:10	09/10/15 11:40

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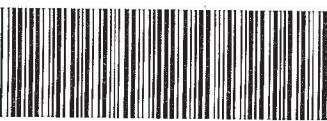
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TestAmerica Seattle

TechAmerica Pot  
911 SW Nimbus Avenue



Beaverton, OR 97008 580-53199 Chain of Custody  
Phone: 503.906.9200 F

## Chain of Custody Record

090111

TechAmerica  
THE LEADER IN ENVIRONMENTAL TESTING  
TestAmerica Laboratories, Inc.  
TAL-8210 (0713)

Regulatory Program:  DW  NPDES  RCRA  Other:

Client Contact		Project Manager: LYNN, FENLEY		Site Contact: BRIAN P. FLEMING		Date: 09/10/15	COC No:
Company Name: ADIANS		Tel/Fax: 503.220.8201 2014		Lab Contact: SARA MURPHY		Carrier:	<input checked="" type="checkbox"/> of <input type="checkbox"/> COCs
Address: 111 SW COLUMBIA ST #670		Analysis Turnaround Time					Sampler: MA/63
City/State/Zip: PORTLAND, OR 97201		<input type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS					For Lab Use Only:
Phone: 503.220.8201		TAT if different from Below					Walk-in Client: <input type="checkbox"/>
Fax:		<input checked="" type="checkbox"/> 2 weeks					Lab Sampling: <input type="checkbox"/>
Project Name: 302015 WILLBRIDGE SAMPLING		<input type="checkbox"/> 1 week					Job / SDG No.: <input type="checkbox"/>
Site: 10018.8		<input type="checkbox"/> 2 days					
P O # 10018.8 2015 WILLBRIDGE SAMPLING BF		<input type="checkbox"/> 1 day					
30045452.0018.00420		Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Sample Specific Notes: BF
Sample Identification		—	—	W			
TRIP BLOCKS		09/10/15	15:10	G	W	12	X X X X X X
B-10-RF-CHEV							
Preservation Used: 1-Ice 2-HCl 3-H2SO4 4-HNO3 5-NaOH 6-Other							
Possible Hazard Identification:							
Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.							
<input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown						<input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Disposal by Lab <input type="checkbox"/> Archive for _____ Months	
Special Instructions/QC Requirements & Comments: * INCLUDING ACETIC ACID, * INCLUDING 2-METHYLNAPHTHALENE PLEASE SEND REPORT TO: BRIAN.FLEMING@ARCADIS-US.COM, BRIAN.MACLURE@ARCADIS-US.COM, CHRIS.DODSON@ARCADIS-US.COM							
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temp. (°C): Obs'd: Corrd: Therm ID No.:			
Relinquished by: <i>Meg Armstrong</i>		Company: ARCADIS	Date/Time: 9/10/15 038	Received by: <i>Brian Murphy</i>	Company: M-E-	Date/Time: 9/10/15 1038	
Relinquished by: <i>America</i>		Company: M-E-	Date/Time: 9/10/15 1140	Received by: <i>TA</i>	Company: TA	Date/Time: 9/10/15 1140	
Relinquished by:		Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:	

11 10 168 17 9 18/6-L 2 1

## Login Sample Receipt Checklist

Client: ARCADIS U.S. Inc

Job Number: 580-53199-1

**Login Number: 53199**

**List Source: TestAmerica Seattle**

**List Number: 1**

**Creator: Gonzales, Steve**

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Seattle

5755 8th Street East

Tacoma, WA 98424

Tel: (253)922-2310

TestAmerica Job ID: 580-53245-1

Client Project/Site: 3Q2015 Willbridge GWM  
B0045452.0018.0042

For:

ARCADIS U.S. Inc  
111 SW Columbia Street  
Suite 670  
Portland, Oregon 97201

Attn: Brian Marcum

Sarah Murphy

Authorized for release by:

10/30/2015 1:54:17 PM

Sarah Murphy, Project Manager I

(253)922-2310

[sarah.murphy@testamericainc.com](mailto:sarah.murphy@testamericainc.com)

### LINKS

Review your project  
results through

Total Access

Have a Question?

Ask  
The  
Expert

Visit us at:

[www.testamericainc.com](http://www.testamericainc.com)

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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# Case Narrative

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53245-1

## Job ID: 580-53245-1

### Laboratory: TestAmerica Seattle

#### Narrative

#### Job Narrative 580-53245-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 9/11/2015 2:10 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 0.9° C, 1.4° C, 2.0° C, 3.0° C and 3.7° C.

#### Receipt Exceptions

No analyses marked on COC for trip blank.

Trip Blanks (580-53245-1) and CR-1-RI-CHEV (580-53245-2)

#### GC/MS VOA

Method(s) 8260B: The surrogate recovery for the blank associated with batch 201735 was outside the upper control limits. All associated sample surrogates fell within acceptance criteria; therefore, the data have been reported.

8260 analysis was canceled for sample 580-53245-1 (Trip Blanks) as there was only enough volume remaining for NWTPH-Gx.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### GC/MS Semi VOA

Method(s) 8270C SIM: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch (LCSD 580-201093/3-A) recovered outside control limits for the following analytes: Benzo[g,h,i]perylene and Benzo[a]pyrene.

Method(s) 8270C SIM: The following analyte recovered outside control limits for the LCS/LCSD associated with preparation batch 580-201093 and analytical batch 580-202181: Anthracene (both LCSD and LCSD), Benzo[a]pyrene (both LCS and LCSD), and Benzo[g,h,i]perylene(LCSD only). These analytes were outside the Marginal Exceedance Limits and were indicative of a systematic problem; therefore, re-extraction and/or re-analysis was performed. The re-extraction yielded improved results, however it was out of hold. Therefore, both sets of data have been qualified and reported: CR-1-RI-CHEV (580-53245-2).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### GC Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Organic Prep

Method(s) 3510C: Samples CR-1-RI-CHEV (580-53245-2) developed moderate emulsion.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Definitions/Glossary

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53245-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits

### GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
*	RPD of the LCS and LCSD exceeds the control limits
H	Sample was prepped or analyzed beyond the specified holding time

### Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

## Glossary

**Abbreviation** These commonly used abbreviations may or may not be present in this report.

✉	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

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# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53245-1

## Client Sample ID: Trip Blanks

Date Collected: 09/11/15 00:00

Date Received: 09/11/15 14:10

## Lab Sample ID: 580-53245-1

Matrix: Water

### Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050		mg/L			09/20/15 19:23	1
<b>Surrogate</b>									
	%Recovery	Qualifier		Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92			50 - 150				09/20/15 19:23	1
Trifluorotoluene (Surr)	112			50 - 150				09/20/15 19:23	1

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53245-1

**Client Sample ID: CR-1-RI-CHEV**

Date Collected: 09/11/15 10:10

Date Received: 09/11/15 14:10

**Lab Sample ID: 580-53245-2**

Matrix: Water

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			09/25/15 17:38	1
Ethylbenzene	ND		3.0		ug/L			09/25/15 17:38	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/25/15 17:38	1
m-Xylene & p-Xylene	ND		3.0		ug/L			09/25/15 17:38	1
o-Xylene	ND		2.0		ug/L			09/25/15 17:38	1
Toluene	ND		2.0		ug/L			09/25/15 17:38	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	101			75 - 120				09/25/15 17:38	1
Dibromofluoromethane (Surr)	102			85 - 115				09/25/15 17:38	1
1,2-Dichloroethane-d4 (Surr)	103			70 - 120				09/25/15 17:38	1
Toluene-d8 (Surr)	99			85 - 120				09/25/15 17:38	1
Trifluorotoluene (Surr)	100			70 - 136				09/25/15 17:38	1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.0099		ug/L		09/17/15 17:01	09/30/15 22:50	1
2-Methylnaphthalene	ND		0.013		ug/L		09/17/15 17:01	09/30/15 22:50	1
1-Methylnaphthalene	ND		0.0099		ug/L		09/17/15 17:01	09/30/15 22:50	1
Acenaphthylene	ND		0.0099		ug/L		09/17/15 17:01	09/30/15 22:50	1
<b>Acenaphthene</b>	<b>0.022</b>		0.0099		ug/L		09/17/15 17:01	09/30/15 22:50	1
<b>Fluorene</b>	<b>0.15</b>		0.0099		ug/L		09/17/15 17:01	09/30/15 22:50	1
Phenanthrene	ND		0.099		ug/L		09/17/15 17:01	09/30/15 22:50	1
Anthracene	ND *		0.025		ug/L		09/17/15 17:01	09/30/15 22:50	1
Fluoranthene	ND		0.049		ug/L		09/17/15 17:01	09/30/15 22:50	1
Pyrene	ND		0.049		ug/L		09/17/15 17:01	09/30/15 22:50	1
Benzo[a]anthracene	ND		0.0099		ug/L		09/17/15 17:01	09/30/15 22:50	1
Chrysene	ND		0.0099		ug/L		09/17/15 17:01	09/30/15 22:50	1
Benzo[a]pyrene	ND *		0.0099		ug/L		09/17/15 17:01	09/30/15 22:50	1
Indeno[1,2,3-cd]pyrene	ND		0.0099		ug/L		09/17/15 17:01	09/30/15 22:50	1
Dibenz(a,h)anthracene	ND		0.0099		ug/L		09/17/15 17:01	09/30/15 22:50	1
Benzo[g,h,i]perylene	ND *		0.0099		ug/L		09/17/15 17:01	09/30/15 22:50	1
Benzo[b]fluoranthene	ND		0.0099		ug/L		09/17/15 17:01	09/30/15 22:50	1
Benzo[k]fluoranthene	ND		0.0099		ug/L		09/17/15 17:01	09/30/15 22:50	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Terphenyl-d14	81			64 - 150				09/17/15 17:01	09/30/15 22:50

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND H		0.56		ug/L		10/10/15 11:07	10/23/15 16:54	50
2-Methylnaphthalene	ND H		0.72		ug/L		10/10/15 11:07	10/23/15 16:54	50
1-Methylnaphthalene	ND H		0.56		ug/L		10/10/15 11:07	10/23/15 16:54	50
Acenaphthylene	ND H		0.56		ug/L		10/10/15 11:07	10/23/15 16:54	50
Acenaphthene	ND H		0.56		ug/L		10/10/15 11:07	10/23/15 16:54	50
Fluorene	ND H		0.56		ug/L		10/10/15 11:07	10/23/15 16:54	50
Phenanthrene	ND H		5.6		ug/L		10/10/15 11:07	10/23/15 16:54	50
Anthracene	ND H		1.4		ug/L		10/10/15 11:07	10/23/15 16:54	50
Fluoranthene	ND H		2.8		ug/L		10/10/15 11:07	10/23/15 16:54	50
Pyrene	ND H		2.8		ug/L		10/10/15 11:07	10/23/15 16:54	50

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53245-1

## Client Sample ID: CR-1-RI-CHEV

Date Collected: 09/11/15 10:10

Date Received: 09/11/15 14:10

## Lab Sample ID: 580-53245-2

Matrix: Water

### Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) - RE (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND	H	0.56		ug/L		10/10/15 11:07	10/23/15 16:54	50
Chrysene	ND	H	0.56		ug/L		10/10/15 11:07	10/23/15 16:54	50
Benzo[a]pyrene	ND	H	0.56		ug/L		10/10/15 11:07	10/23/15 16:54	50
Indeno[1,2,3-cd]pyrene	ND	H	0.56		ug/L		10/10/15 11:07	10/23/15 16:54	50
Dibenz(a,h)anthracene	ND	H	0.56		ug/L		10/10/15 11:07	10/23/15 16:54	50
Benzo[g,h,i]perylene	ND	H	0.56		ug/L		10/10/15 11:07	10/23/15 16:54	50
Benzo[b]fluoranthene	ND	H	0.56		ug/L		10/10/15 11:07	10/23/15 16:54	50
Benzo[k]fluoranthene	ND	H	0.56		ug/L		10/10/15 11:07	10/23/15 16:54	50
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Terphenyl-d14	80		64 - 150				10/10/15 11:07	10/23/15 16:54	50

### Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050		mg/L			09/20/15 22:08	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	92		50 - 150					09/20/15 22:08	1
Trifluorotoluene (Surr)	108		50 - 150					09/20/15 22:08	1

### Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.62		0.11		mg/L		09/23/15 09:06	09/23/15 23:47	1
Motor Oil (>C24-C36)	0.73		0.24		mg/L		09/23/15 09:06	09/23/15 23:47	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
o-Terphenyl	63		50 - 150				09/23/15 09:06	09/23/15 23:47	1

### Method: 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	5.5		0.50		ng/L		09/22/15 14:30	09/23/15 13:54	1

### Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0050		mg/L		09/28/15 13:00	09/29/15 00:21	5
Barium	0.014		0.0060		mg/L		09/28/15 13:00	09/29/15 00:21	5
Cadmium	ND		0.0020		mg/L		09/28/15 13:00	09/29/15 00:21	5
Chromium	ND		0.0020		mg/L		09/28/15 13:00	09/29/15 00:21	5
Copper	ND		0.010		mg/L		09/28/15 13:00	09/29/15 00:21	5
Lead	ND		0.0020		mg/L		09/28/15 13:00	09/29/15 00:21	5
Manganese	0.18		0.010		mg/L		09/28/15 13:00	09/29/15 00:21	5
Selenium	ND		0.0050		mg/L		09/28/15 13:00	09/29/15 00:21	5
Silver	ND		0.0020		mg/L		09/28/15 13:00	09/29/15 00:21	5
Zinc	ND		0.035		mg/L		09/28/15 13:00	09/29/15 00:21	5

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53245-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 580-201735/4**

**Matrix: Water**

**Analysis Batch: 201735**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		2.0		ug/L			09/25/15 13:24	1
Ethylbenzene	ND		3.0		ug/L			09/25/15 13:24	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/25/15 13:24	1
m-Xylene & p-Xylene	ND		3.0		ug/L			09/25/15 13:24	1
o-Xylene	ND		2.0		ug/L			09/25/15 13:24	1
Toluene	ND		2.0		ug/L			09/25/15 13:24	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	107		75 - 120		09/25/15 13:24	1
Dibromofluoromethane (Surr)	112		85 - 115		09/25/15 13:24	1
1,2-Dichloroethane-d4 (Surr)	123	X	70 - 120		09/25/15 13:24	1
Toluene-d8 (Surr)	107		85 - 120		09/25/15 13:24	1
Trifluorotoluene (Surr)	102		70 - 136		09/25/15 13:24	1

**Lab Sample ID: LCS 580-201735/5**

**Matrix: Water**

**Analysis Batch: 201735**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike	LCS	LCS	D	%Rec	%Rec.	Limits
	Added	Result	Qualifier				
Benzene	20.1	21.1		ug/L	105	80 - 120	
Ethylbenzene	20.1	22.6		ug/L	112	75 - 125	
Methyl tert-butyl ether	20.0	23.8		ug/L	119	65 - 125	
m-Xylene & p-Xylene	20.0	22.9		ug/L	114	75 - 130	
o-Xylene	20.0	23.2		ug/L	116	80 - 120	
Toluene	20.0	21.1		ug/L	105	75 - 120	

Surrogate	LCSD	LCSD	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	99		75 - 120			
Dibromofluoromethane (Surr)	110		85 - 115			
1,2-Dichloroethane-d4 (Surr)	117		70 - 120			
Toluene-d8 (Surr)	100		85 - 120			
Trifluorotoluene (Surr)	101		70 - 136			

**Lab Sample ID: LCSD 580-201735/6**

**Matrix: Water**

**Analysis Batch: 201735**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike	LCSD	LCSD	D	%Rec	%Rec.	RPD	RPD Limit
	Added	Result	Qualifier					
Benzene	20.1	21.4		ug/L	107	80 - 120	1	30
Ethylbenzene	20.1	23.3		ug/L	116	75 - 125	3	30
Methyl tert-butyl ether	20.0	22.4		ug/L	112	65 - 125	6	30
m-Xylene & p-Xylene	20.0	23.4		ug/L	117	75 - 130	2	30
o-Xylene	20.0	23.9		ug/L	119	80 - 120	3	30
Toluene	20.0	21.6		ug/L	108	75 - 120	2	30

Surrogate	LCSD	LCSD	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	98		75 - 120			

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53245-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID:** LCSD 580-201735/6

**Matrix:** Water

**Analysis Batch:** 201735

**Client Sample ID:** Lab Control Sample Dup

**Prep Type:** Total/NA

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Dibromofluoromethane (Surr)	109		85 - 115
1,2-Dichloroethane-d4 (Surr)	111		70 - 120
Toluene-d8 (Surr)	98		85 - 120
Trifluorotoluene (Surr)	99		70 - 136

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

**Lab Sample ID:** MB 580-201093/1-A

**Matrix:** Water

**Analysis Batch:** 202181

**Client Sample ID:** Method Blank

**Prep Type:** Total/NA

**Prep Batch:** 201093

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	MB Result	MB Qualifier	RL	MDL	Unit		Prepared	Analyzed	
Naphthalene	ND		0.010		ug/L	09/17/15 17:01	09/30/15 18:36		1
2-Methylnaphthalene	ND		0.013		ug/L	09/17/15 17:01	09/30/15 18:36		1
1-Methylnaphthalene	ND		0.010		ug/L	09/17/15 17:01	09/30/15 18:36		1
Acenaphthylene	ND		0.010		ug/L	09/17/15 17:01	09/30/15 18:36		1
Acenaphthene	ND		0.010		ug/L	09/17/15 17:01	09/30/15 18:36		1
Fluorene	ND		0.010		ug/L	09/17/15 17:01	09/30/15 18:36		1
Phenanthrene	ND		0.10		ug/L	09/17/15 17:01	09/30/15 18:36		1
Anthracene	ND		0.025		ug/L	09/17/15 17:01	09/30/15 18:36		1
Fluoranthene	ND		0.050		ug/L	09/17/15 17:01	09/30/15 18:36		1
Pyrene	ND		0.050		ug/L	09/17/15 17:01	09/30/15 18:36		1
Benzo[a]anthracene	ND		0.010		ug/L	09/17/15 17:01	09/30/15 18:36		1
Chrysene	ND		0.010		ug/L	09/17/15 17:01	09/30/15 18:36		1
Benzo[a]pyrene	ND		0.010		ug/L	09/17/15 17:01	09/30/15 18:36		1
Indeno[1,2,3-cd]pyrene	ND		0.010		ug/L	09/17/15 17:01	09/30/15 18:36		1
Dibenz(a,h)anthracene	ND		0.010		ug/L	09/17/15 17:01	09/30/15 18:36		1
Benzo[g,h,i]perylene	ND		0.010		ug/L	09/17/15 17:01	09/30/15 18:36		1
Benzo[b]fluoranthene	ND		0.010		ug/L	09/17/15 17:01	09/30/15 18:36		1
Benzo[k]fluoranthene	ND		0.010		ug/L	09/17/15 17:01	09/30/15 18:36		1
Surrogate	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Terphenyl-d14	102			64 - 150			09/17/15 17:01	09/30/15 18:36	1

**Lab Sample ID:** LCS 580-201093/2-A

**Matrix:** Water

**Analysis Batch:** 202181

**Client Sample ID:** Lab Control Sample

**Prep Type:** Total/NA

**Prep Batch:** 201093

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits	Dil Fac
	Added	Result	Qualifier	Unit				
Naphthalene	1.00	0.776		ug/L	78	54 - 106		
2-Methylnaphthalene	1.00	0.823		ug/L	82	54 - 114		
1-Methylnaphthalene	1.00	0.818		ug/L	82	57 - 115		
Acenaphthylene	1.00	0.344		ug/L	34	30 - 127		
Acenaphthene	1.00	0.744		ug/L	74	54 - 109		
Fluorene	1.00	0.831		ug/L	83	50 - 130		
Phenanthrene	1.00	0.863		ug/L	86	53 - 115		
Anthracene	1.00	0.223 *		ug/L	22	30 - 130		

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53245-1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

**Lab Sample ID: LCS 580-201093/2-A**

**Matrix: Water**

**Analysis Batch: 202181**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 201093**

**%Rec.**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Fluoranthene	1.00	0.777		ug/L	78	58 - 128	
Pyrene	1.00	0.697		ug/L	70	53 - 121	
Benzo[a]anthracene	1.00	0.582		ug/L	58	35 - 125	
Chrysene	1.00	0.833		ug/L	83	57 - 120	
Benzo[a]pyrene	1.00	0.100	*	ug/L	10	30 - 127	
Indeno[1,2,3-cd]pyrene	1.00	0.933		ug/L	93	53 - 131	
Dibenz(a,h)anthracene	1.00	1.07		ug/L	107	60 - 136	
Benzo[g,h,i]perylene	1.00	0.896		ug/L	90	51 - 128	
Benzo[b]fluoranthene	1.00	0.993		ug/L	99	59 - 126	
Benzo[k]fluoranthene	1.00	0.908		ug/L	91	49 - 136	
<b>Surrogate</b>		<b>LCS</b>	<b>LCS</b>				
<i>Terphenyl-d14</i>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			
		91		64 - 150			

**Lab Sample ID: LCSD 580-201093/3-A**

**Matrix: Water**

**Analysis Batch: 202181**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 201093**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Naphthalene	1.00	0.758		ug/L	76	54 - 106		2	20
2-Methylnaphthalene	1.00	0.802		ug/L	80	54 - 114		3	20
1-Methylnaphthalene	1.00	0.799		ug/L	80	57 - 115		2	20
Acenaphthylene	1.00	0.299		ug/L	30	30 - 127		14	20
Acenaphthene	1.00	0.705		ug/L	70	54 - 109		5	20
Fluorene	1.00	0.812		ug/L	81	50 - 130		2	20
Phenanthrene	1.00	0.829		ug/L	83	53 - 115		4	20
Anthracene	1.00	0.256	*	ug/L	26	30 - 130		14	20
Fluoranthene	1.00	0.737		ug/L	74	58 - 128		5	20
Pyrene	1.00	0.633		ug/L	63	53 - 121		10	20
Benzo[a]anthracene	1.00	0.552		ug/L	55	35 - 125		5	20
Chrysene	1.00	0.800		ug/L	80	57 - 120		4	20
Benzo[a]pyrene	1.00	ND	*	ug/L	0	30 - 127		200	20
Indeno[1,2,3-cd]pyrene	1.00	0.779		ug/L	78	53 - 131		18	20
Dibenz(a,h)anthracene	1.00	0.930		ug/L	93	60 - 136		14	20
Benzo[g,h,i]perylene	1.00	0.442	*	ug/L	44	51 - 128		68	20
Benzo[b]fluoranthene	1.00	0.893		ug/L	89	59 - 126		11	20
Benzo[k]fluoranthene	1.00	0.795		ug/L	79	49 - 136		13	20
<b>Surrogate</b>		<b>LCSD</b>	<b>LCSD</b>						
<i>Terphenyl-d14</i>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>					
		87		64 - 150					

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53245-1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) - RE

**Lab Sample ID: MB 580-202974/1-A**

**Matrix: Water**

**Analysis Batch: 204037**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 202974**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene - RE	ND		0.010		ug/L				1
2-Methylnaphthalene - RE	ND		0.013		ug/L	10/10/15 11:07	10/22/15 14:18		1
1-Methylnaphthalene - RE	ND		0.010		ug/L	10/10/15 11:07	10/22/15 14:18		1
Acenaphthylene - RE	ND		0.010		ug/L	10/10/15 11:07	10/22/15 14:18		1
Acenaphthene - RE	ND		0.010		ug/L	10/10/15 11:07	10/22/15 14:18		1
Fluorene - RE	ND		0.010		ug/L	10/10/15 11:07	10/22/15 14:18		1
Phenanthrene - RE	ND		0.10		ug/L	10/10/15 11:07	10/22/15 14:18		1
Anthracene - RE	ND		0.025		ug/L	10/10/15 11:07	10/22/15 14:18		1
Fluoranthene - RE	ND		0.050		ug/L	10/10/15 11:07	10/22/15 14:18		1
Pyrene - RE	ND		0.050		ug/L	10/10/15 11:07	10/22/15 14:18		1
Benzo[a]anthracene - RE	ND		0.010		ug/L	10/10/15 11:07	10/22/15 14:18		1
Chrysene - RE	ND		0.010		ug/L	10/10/15 11:07	10/22/15 14:18		1
Benzo[a]pyrene - RE	ND		0.010		ug/L	10/10/15 11:07	10/22/15 14:18		1
Indeno[1,2,3-cd]pyrene - RE	ND		0.010		ug/L	10/10/15 11:07	10/22/15 14:18		1
Dibenz(a,h)anthracene - RE	ND		0.010		ug/L	10/10/15 11:07	10/22/15 14:18		1
Benzo[g,h,i]perylene - RE	ND		0.010		ug/L	10/10/15 11:07	10/22/15 14:18		1
Benzo[b]fluoranthene - RE	ND		0.010		ug/L	10/10/15 11:07	10/22/15 14:18		1
Benzo[k]fluoranthene - RE	ND		0.010		ug/L	10/10/15 11:07	10/22/15 14:18		1

Surrogate	MB %Recovery	MB Qualifier	MB Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14 - RE	64		64 - 150	10/10/15 11:07	10/22/15 14:18	1

**Lab Sample ID: LCS 580-202974/2-A**

**Matrix: Water**

**Analysis Batch: 204037**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 202974**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	Limits
Naphthalene - RE	1.00	0.658		ug/L		66	54 - 106	
2-Methylnaphthalene - RE	1.00	0.685		ug/L		68	54 - 114	
1-Methylnaphthalene - RE	1.00	0.699		ug/L		70	57 - 115	
Acenaphthylene - RE	1.00	0.625		ug/L		63	30 - 127	
Acenaphthene - RE	1.00	0.652		ug/L		65	54 - 109	
Fluorene - RE	1.00	0.676		ug/L		68	50 - 130	
Phenanthrene - RE	1.00	0.740		ug/L		74	53 - 115	
Anthracene - RE	1.00	0.439		ug/L		44	30 - 130	
Fluoranthene - RE	1.00	0.685		ug/L		68	58 - 128	
Pyrene - RE	1.00	0.648		ug/L		65	53 - 121	
Benzo[a]anthracene - RE	1.00	0.629		ug/L		63	35 - 125	
Chrysene - RE	1.00	0.772		ug/L		77	57 - 120	
Benzo[a]pyrene - RE	1.00	0.471		ug/L		47	30 - 127	
Indeno[1,2,3-cd]pyrene - RE	1.00	0.892		ug/L		89	53 - 131	
Dibenz(a,h)anthracene - RE	1.00	0.941		ug/L		94	60 - 136	
Benzo[g,h,i]perylene - RE	1.00	0.861		ug/L		86	51 - 128	
Benzo[b]fluoranthene - RE	1.00	0.863		ug/L		86	59 - 126	
Benzo[k]fluoranthene - RE	1.00	0.885		ug/L		88	49 - 136	

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53245-1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) - RE (Continued)

Lab Sample ID: LCS 580-202974/2-A

Matrix: Water

Analysis Batch: 204037

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 202974

Surrogate	LCS	LCS	%Recovery	Qualifier	Limits
Terphenyl-d14 - RE			74		64 - 150

Lab Sample ID: LCSD 580-202974/3-A

Matrix: Water

Analysis Batch: 204037

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 202974

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.	RPD	Limit
Naphthalene - RE	1.00	0.724		ug/L	72	54 - 106	10	20	
2-Methylnaphthalene - RE	1.00	0.747		ug/L	75	54 - 114	9	20	
1-Methylnaphthalene - RE	1.00	0.775		ug/L	78	57 - 115	10	20	
Acenaphthylene - RE	1.00	0.680		ug/L	68	30 - 127	8	20	
Acenaphthene - RE	1.00	0.720		ug/L	72	54 - 109	10	20	
Fluorene - RE	1.00	0.735		ug/L	74	50 - 130	8	20	
Phenanthrene - RE	1.00	0.791		ug/L	79	53 - 115	7	20	
Anthracene - RE	1.00	0.466		ug/L	47	30 - 130	6	20	
Fluoranthene - RE	1.00	0.707		ug/L	71	58 - 128	3	20	
Pyrene - RE	1.00	0.674		ug/L	67	53 - 121	4	20	
Benzo[a]anthracene - RE	1.00	0.670		ug/L	67	35 - 125	6	20	
Chrysene - RE	1.00	0.826		ug/L	83	57 - 120	7	20	
Benzo[a]pyrene - RE	1.00	0.475		ug/L	47	30 - 127	1	20	
Indeno[1,2,3-cd]pyrene - RE	1.00	0.962		ug/L	96	53 - 131	8	20	
Dibenz(a,h)anthracene - RE	1.00	1.01		ug/L	101	60 - 136	7	20	
Benzo[g,h,i]perylene - RE	1.00	0.922		ug/L	92	51 - 128	7	20	
Benzo[b]fluoranthene - RE	1.00	0.925		ug/L	92	59 - 126	7	20	
Benzo[k]fluoranthene - RE	1.00	0.922		ug/L	92	49 - 136	4	20	

Surrogate	LCSD	LCSD	%Recovery	Qualifier	Limits
Terphenyl-d14 - RE			75		64 - 150

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Lab Sample ID: MB 580-201281/5

Matrix: Water

Analysis Batch: 201281

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050		mg/L			09/20/15 17:44	1
<hr/>									
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		50 - 150					09/20/15 17:44	1
Trifluorotoluene (Surr)	112		50 - 150					09/20/15 17:44	1

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53245-1

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC) (Continued)

**Lab Sample ID: LCS 580-201281/6**

**Matrix: Water**

**Analysis Batch: 201281**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.
Gasoline	1.16	1.09		mg/L		94	79 - 110
Surrogate	LCS %Recovery	LCS Qualifier	Limits				Limits
4-Bromofluorobenzene (Surr)	98		50 - 150				
Trifluorotoluene (Surr)	117		50 - 150				

**Lab Sample ID: LCSD 580-201281/7**

**Matrix: Water**

**Analysis Batch: 201281**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.	RPD
Gasoline	1.16	1.09		mg/L		93	79 - 110	1
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits				Limits	RPD
4-Bromofluorobenzene (Surr)	98		50 - 150					
Trifluorotoluene (Surr)	117		50 - 150					

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

**Lab Sample ID: MB 580-201493/1-A**

**Matrix: Water**

**Analysis Batch: 201519**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 201493**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.11		mg/L		09/23/15 09:06	09/23/15 22:53	1
Motor Oil (>C24-C36)	ND		0.25		mg/L		09/23/15 09:06	09/23/15 22:53	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	54		50 - 150				09/23/15 09:06	09/23/15 22:53	1

**Lab Sample ID: LCS 580-201493/2-A**

**Matrix: Water**

**Analysis Batch: 201519**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 201493**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.
#2 Diesel (C10-C24)	0.500	0.470		mg/L		94	59 - 120
Motor Oil (>C24-C36)	0.502	0.501		mg/L		100	71 - 140
Surrogate	LCS %Recovery	LCS Qualifier	Limits				Limits
o-Terphenyl	91		50 - 150				

**Lab Sample ID: LCSD 580-201493/3-A**

**Matrix: Water**

**Analysis Batch: 201519**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 201493**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.	RPD
#2 Diesel (C10-C24)	0.500	0.458		mg/L		92	59 - 120	2

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53245-1

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: LCSD 580-201493/3-A

Matrix: Water

Analysis Batch: 201519

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 201493

%Rec.

RPD

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Motor Oil (>C24-C36)	0.502	0.500		mg/L		100	71 - 140	0	27
Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits						
<i>o-Terphenyl</i>	84		50 - 150						

## Method: 1631E - Mercury, Low Level (CVAFS)

Lab Sample ID: MB 240-198601/1-A

Matrix: Water

Analysis Batch: 198816

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 198601

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.50		ng/L		09/22/15 14:30	09/23/15 09:15	1

Lab Sample ID: LCS 240-198601/2-A

Matrix: Water

Analysis Batch: 198816

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 198601

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits		
Mercury	5.00	4.87		ng/L		97	77 - 123		

## Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 580-201911/20-A

Matrix: Water

Analysis Batch: 201970

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 201911

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0050		mg/L		09/28/15 13:00	09/28/15 22:18	5
Barium	ND		0.0060		mg/L		09/28/15 13:00	09/28/15 22:18	5
Cadmium	ND		0.0020		mg/L		09/28/15 13:00	09/28/15 22:18	5
Chromium	ND		0.0020		mg/L		09/28/15 13:00	09/28/15 22:18	5
Copper	ND		0.010		mg/L		09/28/15 13:00	09/28/15 22:18	5
Lead	ND		0.0020		mg/L		09/28/15 13:00	09/28/15 22:18	5
Manganese	ND		0.010		mg/L		09/28/15 13:00	09/28/15 22:18	5
Selenium	ND		0.0050		mg/L		09/28/15 13:00	09/28/15 22:18	5
Silver	ND		0.0020		mg/L		09/28/15 13:00	09/28/15 22:18	5
Zinc	ND		0.035		mg/L		09/28/15 13:00	09/28/15 22:18	5

Lab Sample ID: LCS 580-201911/21-A

Matrix: Water

Analysis Batch: 201970

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 201911

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits		
Arsenic	4.00	4.10		mg/L		102	80 - 120		
Barium	4.00	4.21		mg/L		105	80 - 120		
Cadmium	0.100	0.104		mg/L		104	80 - 120		
Chromium	0.400	0.393		mg/L		98	80 - 120		

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53245-1

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: LCS 580-201911/21-A**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 201911**

**%Rec.**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits	
Copper	0.500	0.500		mg/L		100	80 - 120	
Lead	1.00	0.939		mg/L		94	80 - 120	
Manganese	1.00	1.01		mg/L		101	80 - 120	
Selenium	4.00	4.25		mg/L		106	80 - 120	
Silver	0.600	0.588		mg/L		98	80 - 120	
Zinc	4.00	4.03		mg/L		101	80 - 120	

**Lab Sample ID: LCSD 580-201911/22-A**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 201911**

**%Rec.**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	4.00	4.07		mg/L		102	80 - 120	1	20
Barium	4.00	4.14		mg/L		103	80 - 120	2	20
Cadmium	0.100	0.104		mg/L		104	80 - 120	0	20
Chromium	0.400	0.392		mg/L		98	80 - 120	0	20
Copper	0.500	0.502		mg/L		100	80 - 120	0	20
Lead	1.00	0.930		mg/L		93	80 - 120	1	20
Manganese	1.00	1.01		mg/L		101	80 - 120	0	20
Selenium	4.00	4.21		mg/L		105	80 - 120	1	20
Silver	0.600	0.582		mg/L		97	80 - 120	1	20
Zinc	4.00	4.01		mg/L		100	80 - 120	1	20

**Lab Sample ID: 580-53364-D-9-C MS**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Matrix Spike**

**Prep Type: Total/NA**

**Prep Batch: 201911**

**%Rec.**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits	
Arsenic	0.015		4.00	4.10		mg/L		102	80 - 120	
Barium	0.097		4.00	4.22		mg/L		103	80 - 120	
Cadmium	ND		0.100	0.103		mg/L		103	80 - 120	
Chromium	0.0040		0.400	0.402		mg/L		100	80 - 120	
Copper	ND		0.500	0.509		mg/L		102	80 - 120	
Lead	ND		1.00	0.957		mg/L		96	80 - 120	
Manganese	6.0		1.00	6.41	4	mg/L		39	80 - 120	
Selenium	ND		4.00	4.27		mg/L		107	80 - 120	
Silver	ND		0.600	0.581		mg/L		97	80 - 120	
Zinc	ND		4.00	4.07		mg/L		101	80 - 120	

**Lab Sample ID: 580-53364-D-9-D MSD**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total/NA**

**Prep Batch: 201911**

**%Rec.**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	0.015		4.00	4.38		mg/L		109	80 - 120	7	20
Barium	0.097		4.00	4.55		mg/L		111	80 - 120	8	20
Cadmium	ND		0.100	0.113		mg/L		113	80 - 120	10	20
Chromium	0.0040		0.400	0.434		mg/L		108	80 - 120	8	20
Copper	ND		0.500	0.541		mg/L		108	80 - 120	6	20

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53245-1

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: 580-53364-D-9-D MSD**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total/NA**

**Prep Batch: 201911**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier						
Lead	ND		1.00	1.02		mg/L		102	80 - 120	7	20
Manganese	6.0		1.00	6.94	4	mg/L		92	80 - 120	8	20
Selenium	ND		4.00	4.44		mg/L		111	80 - 120	4	20
Silver	ND		0.600	0.613		mg/L		102	80 - 120	5	20
Zinc	ND		4.00	4.35		mg/L		108	80 - 120	7	20

**Lab Sample ID: 580-53364-D-9-B DU**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Duplicate**

**Prep Type: Total/NA**

**Prep Batch: 201911**

Analyte	Sample	Sample	DU	DU	Unit	D				RPD	Limit
	Result	Qualifier	Result	Qualifier							
Arsenic	0.015		0.0147		mg/L					2	20
Barium	0.097		0.0981		mg/L					1	20
Cadmium	ND		ND		mg/L					NC	20
Chromium	0.0040		0.00364		mg/L					9	20
Copper	ND		ND		mg/L					NC	20
Lead	ND		ND		mg/L					NC	20
Manganese	6.0		6.06		mg/L					0.6	20
Selenium	ND		ND		mg/L					NC	20
Silver	ND		ND		mg/L					NC	20
Zinc	ND		ND		mg/L					NC	20

TestAmerica Seattle

# Lab Chronicle

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53245-1

**Client Sample ID: Trip Blanks**

**Date Collected: 09/11/15 00:00**

**Date Received: 09/11/15 14:10**

**Lab Sample ID: 580-53245-1**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	NWTPH-Gx		1	201281	09/20/15 19:23	HDK	TAL SEA

**Client Sample ID: CR-1-RI-CHEV**

**Date Collected: 09/11/15 10:10**

**Date Received: 09/11/15 14:10**

**Lab Sample ID: 580-53245-2**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	201735	09/25/15 17:38	K1K	TAL SEA
Total/NA	Prep	3520C			201093	09/17/15 17:01	JDR	TAL SEA
Total/NA	Analysis	8270C SIM		1	202181	09/30/15 22:50	ERZ	TAL SEA
Total/NA	Prep	3520C	RE		202974	10/10/15 11:07	JDR	TAL SEA
Total/NA	Analysis	8270C SIM	RE	50	204128	10/23/15 16:54	ERZ	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	201281	09/20/15 22:08	HDK	TAL SEA
Total/NA	Prep	3510C			201493	09/23/15 09:06	DCC	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	201519	09/23/15 23:47	KW	TAL SEA
Total/NA	Prep	1631E			198601	09/22/15 14:30	DNS	TAL CAN
Total/NA	Analysis	1631E		1	198816	09/23/15 13:54	DSH	TAL CAN
Total/NA	Prep	3010A			201911	09/28/15 13:00	PAB	TAL SEA
Total/NA	Analysis	6020		5	201970	09/29/15 00:21	FCW	TAL SEA

**Laboratory References:**

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

TestAmerica Seattle

## Certification Summary

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53245-1

### Laboratory: TestAmerica Seattle

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-022	03-02-16
California	State Program	9	2901	01-31-17
L-A-B	DoD ELAP		L2236	01-19-16
L-A-B	ISO/IEC 17025		L2236	01-19-16
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-06-16
US Fish & Wildlife	Federal		LE058448-0	02-28-16
USDA	Federal		P330-14-00126	04-08-17
Washington	State Program	10	C553	02-17-16

### Laboratory: TestAmerica Canton

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	NELAP	9	01144CA	06-30-14 *
California	State Program	9	2927	04-30-17
Connecticut	State Program	1	PH-0590	12-31-15
Illinois	NELAP	5	200004	07-31-16
Kansas	NELAP	7	E-10336	01-31-16 *
Kentucky (UST)	State Program	4	58	02-26-16
Kentucky (WW)	State Program	4	98016	12-31-15
L-A-B	DoD ELAP		L2315	07-18-16
Minnesota	NELAP	5	039-999-348	12-31-15
Nevada	State Program	9	OH-000482008A	07-31-16
New Jersey	NELAP	2	OH001	10-30-15 *
New York	NELAP	2	10975	03-31-16
Ohio VAP	State Program	5	CL0024	10-31-15 *
Oregon	NELAP	10	4062	02-23-16
Pennsylvania	NELAP	3	68-00340	08-31-16
Texas	NELAP	6	T104704517-15-5	08-31-16
USDA	Federal		P330-13-00319	11-26-16
Virginia	NELAP	3	460175	09-14-16
Washington	State Program	10	C971	01-12-16
West Virginia DEP	State Program	3	210	12-31-15
Wisconsin	State Program	5	999518190	08-31-16

\* Certification renewal pending - certification considered valid.

## Sample Summary

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53245-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-53245-1	Trip Blanks	Water	09/11/15 00:00	09/11/15 14:10
580-53245-2	CR-1-RI-CHEV	Water	09/11/15 10:10	09/11/15 14:10

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TestAmerica Seattle

**TestAmerica Portland**  
941 N Nimbus Avenue

Beaverton, OR 97008  
Phone: 503.906.9200 Fax:



Chain of Custody Record

090099

**TestAmerica**

THE LEADER IN ENVIRONMENTAL TESTING  
TestAmerica Laboratories, Inc.

TAL-8210 (0713)

Client Contact		580-53245 Chain of Custody					Site Contact: <i>BRIAN FLEMING</i>		Date: 09/11/15	COC No:
Company Name: ARCADIS		Fax: 503.920.8201 x1114					Lab Contact: <i>SARAH MARSHALL</i>		Carrier:	1 of 1 COCs
Address: 111 SW COLUMBIA ST STE 670		Analysis Turnaround Time								Sampler:
City/State/Zip: PORTLAND, OR 97201		<input type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS								For Lab Use Only:
Phone: 503.220.8201		TAT if different from Below								Walk-in Client:
Fax:		<input checked="" type="checkbox"/> 2 weeks								Lab Sampling:
Project Name: 3Q2015 WILBURDGE GUM		<input type="checkbox"/> 1 week								Job / SDG No.:
Site: 1001268		<input type="checkbox"/> 2 days								
PO # B0045452,0018,00420		<input type="checkbox"/> 1 day								
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)	Perform MS / MSD (Y/N)		Sample Specific Notes:
<i>TRIP BLANKS</i>		-	-	W	W	1	<i>RTX-MIBE</i>	<i>RTX-MIBE</i>		
<i>CR-1-RJ-CHEV</i>		9/11/15	10:10	G	W	12	<i>WATPH-GX</i>	<i>WATPH-GX</i>		
							<i>WATPH-DX</i>	<i>WATPH-DX</i>		
							<i>DAT (Junk) 10/11/15</i>	<i>DAT (Junk) 10/11/15</i>		
							<i>TOTAL METALS</i>	<i>TOTAL METALS</i>		
							<i>CHNDE</i>	<i>CHNDE</i>		
							<i>TOC</i>	<i>TOC</i>		
							<i>Glucose - unlabel</i>	<i>Glucose - unlabel</i>		
Preservation Used: <input checked="" type="checkbox"/> 1-Ice <input type="checkbox"/> 2-HCl <input type="checkbox"/> 3-H <sub>2</sub> SO <sub>4</sub> <input type="checkbox"/> 4-HNO <sub>3</sub> <input type="checkbox"/> 5-NaOH <input type="checkbox"/> 6-Other										
Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.										
<input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown										
Special Instructions/QC Requirements & Comments: <i>*RCRA &amp; CUSTEN, *2-METHYLNAPHTHENE</i>										
PLEASE SEND REPORT TO: <i>BRIAN.FLEMING@ARCALIS-US.COM BRIAN.MARSHALL@ARCALIS-US.COM</i>										
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:			Cooler Temp. (°C): Obs'd:			Corr'd:	Therm ID No.:	
Relinquished by: <i>Meg Amington</i>		Company: ARCADIS		Date/Time: 9/11/15 13:37		Received by: <i>America M.</i>		Company: M-E.	Date/Time: 9/11/15 13:37	
Relinquished by: <i>America M.</i>		Company: M-E.		Date/Time: 9/11/15 14:10		Received by: <i>M.</i>		Company: M	Date/Time: 9/11/15 @ 14:14	
Relinquished by:		Company:		Date/Time:		Received in Laboratory by:		Company:	Date/Time:	

3.7, 1.4, 3.0, 0.9, 2.0 10 6 8 7 9 5 4 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100

20.2 21.2

## **Chain of Custody Record**



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)		Sampler:		Lab PM: Murphy, Sarah/A		Carrier Tracking No(s):		COC No: 560-30238.1	
Client Contact: Shipping/Receiving		Phone:		E-Mail: sarah.murphy@testamericainc.com				Page: Page 1 of 1	
Company: TestAmerica Laboratories, Inc.								Job #: 580-53245-1	
Address: 4101 Shuffel Street NW,		Due Date Requested: 9/23/2015				Analysis Requested		Preservation Codes:	
City: North Canton		TAT Requested (days):						A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amcholor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA	M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - ph 4-5 Z - other (specify)
State, Zip: OH, 44720		PO #:						Other:	
Phone: 330-497-9396(Tel) 330-497-0772(Fax)		WO #:						LL4G	
Email:								Special Instructions/Note:	
Project Name: 3Q2015 Willbridge GWM B0045452.0018.0042		Project #: 58008238							
Site:		SSOW#:							
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil) (T=Tissue, A=Air)	Field Filtered Sample Yes or No	MSMSD Yes or No	Total Number of containers	
CR-1-RI-CHEV (580-53245-2)		9/11/15	10:10 Pacific		Water	X			
Possible Hazard Identification		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)							
Unconfirmed		<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For Months							
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:							
Empty Kit Relinquished by:		Date:	Time:		Method of Shipment:				
Relinquished by:		Date/Time:	Company		Received by:		Date/Time:		Company
Relinquished by:		Date/Time:	Company		Received by:		Date/Time:		Company
Relinquished by:		Date/Time:	Company		Received by:		Date/Time:		Company
Custody Seals Intact:		Custody Seal No.:				Cooler Temperature(s) °C and Other Remarks:			
<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No									

TestAmerica Canton Sample Receipt Form/Narrative  
Canton Facility

Login #:

Client <u>Seattle</u>	Site Name	Cooler unpacked by: <u>A</u>
Cooler Received on <u>9-15-15</u> Opened on <u>9-15-15</u>		
FedEx: 1 <sup>st</sup> Grd <input checked="" type="checkbox"/> UPS FAS Stetson Client Drop Off TestAmerica Courier Other		
Receipt After-hours: Drop-off Date/Time		Storage Location
TestAmerica Cooler # _____	Foam Box	Client Cooler <input checked="" type="checkbox"/> Box Other _____
Packing material used: <u>Bubble Wrap</u>	Foam	Plastic Bag None Other _____
COOLANT: Wet Ice	Blue Ice	Dry Ice Water <input checked="" type="checkbox"/>
1. Cooler temperature upon receipt		
IR GUN# A (CF +1.0 °C)	Observed Cooler Temp. <u>20.2</u> °C	Corrected Cooler Temp. <u>21.2</u> °C
IR GUN# 4 (CF +0.5 °C)	Observed Cooler Temp. _____ °C	Corrected Cooler Temp. _____ °C
IR GUN# 5 (CF +0.4 °C)	Observed Cooler Temp. _____ °C	Corrected Cooler Temp. _____ °C
IR GUN# 8 (CF -1.5 °C)	Observed Cooler Temp. _____ °C	Corrected Cooler Temp. _____ °C
2. Were custody seals on the outside of the cooler(s)? If Yes Quantity <u>1</u>		
-Were custody seals on the outside of the cooler(s) signed & dated?	Yes <input checked="" type="checkbox"/>	No NA
-Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes <input checked="" type="checkbox"/>	No
3. Shippers' packing slip attached to the cooler(s)?	Yes <input checked="" type="checkbox"/>	No
4. Did custody papers accompany the sample(s)?	Yes <input checked="" type="checkbox"/>	No
5. Were the custody papers relinquished & signed in the appropriate place?	Yes <input checked="" type="checkbox"/>	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	Yes <input checked="" type="checkbox"/>	No
7. Did all bottles arrive in good condition (Unbroken)?	Yes <input checked="" type="checkbox"/>	No
8. Could all bottle labels be reconciled with the COC?	Yes <input checked="" type="checkbox"/>	No
9. Were correct bottle(s) used for the test(s) indicated?	Yes <input checked="" type="checkbox"/>	No
10. Sufficient quantity received to perform indicated analyses?	Yes <input checked="" type="checkbox"/>	No
11. Were sample(s) at the correct pH upon receipt?	Yes <input checked="" type="checkbox"/>	No NA pH Strip Lot# <u>HC554612</u>
12. Were VOAs on the COC?	Yes <input checked="" type="checkbox"/>	No
13. Were air bubbles >6 mm in any VOA vials?	Yes <input checked="" type="checkbox"/>	No NA
14. Was a trip blank present in the cooler(s)? Trip Blank Lot # _____	Yes <input checked="" type="checkbox"/>	No
Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____	Concerning _____	

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by: \_\_\_\_\_

15. SAMPLE CONDITION

Sample(s) \_\_\_\_\_ were received after the recommended holding time had expired.  
 Sample(s) \_\_\_\_\_ were received in a broken container.  
 Sample(s) \_\_\_\_\_ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) \_\_\_\_\_ were further preserved in the laboratory.  
 Time preserved: \_\_\_\_\_ Preservative(s) added/Lot number(s): \_\_\_\_\_

## Login Sample Receipt Checklist

Client: ARCADIS U.S. Inc

Job Number: 580-53245-1

SDG Number:

**Login Number: 53245**

**List Source: TestAmerica Seattle**

**List Number: 1**

**Creator: Lehman, Clarissa A**

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

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# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Seattle  
5755 8th Street East  
Tacoma, WA 98424  
Tel: (253)922-2310

TestAmerica Job ID: 580-53290-1

TestAmerica Sample Delivery Group: CVX 1001868  
Client Project/Site: 3Q2015 Willbridge GWM  
B0045452.0018.0042

For:

ARCADIS U.S. Inc  
111 SW Columbia Street  
Suite 670  
Portland, Oregon 97201

Attn: Brian Marcum

Sarah Murphy

Authorized for release by:

10/30/2015 2:24:54 PM

Sarah Murphy, Project Manager I  
(253)922-2310  
[sarah.murphy@testamericainc.com](mailto:sarah.murphy@testamericainc.com)

### LINKS

Review your project  
results through

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Have a Question?

Ask  
The  
Expert

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[www.testamericainc.com](http://www.testamericainc.com)

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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# Case Narrative

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53290-1

SDG: CVX 1001868

## Job ID: 580-53290-1

### Laboratory: TestAmerica Seattle

#### Narrative

#### Job Narrative 580-53290-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 9/14/2015 1:30 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.7° C.

#### GC/MS VOA

Method(s) 8260B: The surrogate recovery for the blank associated with batch 201735 was outside the upper control limits. All associated sample surrogates fell within acceptance criteria; therefore, the data have been reported.

8260 analysis was canceled for sample 580-53290-1 (Trip Blanks) as there was only enough volume remaining for NWTPH-Gx.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### GC/MS Semi VOA

Method(s) 8270C SIM: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch (LCSD 580-201093/3-A) recovered outside control limits for the following analytes: Benzo[g,h,i]perylene and Benzo[a]pyrene.

Method(s) 8270C SIM: The following analyte recovered outside control limits for the LCS/LCSD associated with preparation batch 580-201093 and analytical batch 580-202181: Anthracene (both LCSD and LCSD), Benzo[a]pyrene (both LCS and LCSD), and Benzo[g,h,i]perylene(LCSD only). These analytes were outside the Marginal Exceedance Limits and were indicative of a systematic problem; therefore, re-extraction and/or re-analysis was performed. The re-extraction yielded improved results, however it was out of hold. Therefore, both sets of data have been qualified and reported: B-9A-RI-CHEV (580-53290-2).

Method(s) 8270C SIM: The following sample was diluted to bring the concentration of target analytes within the calibration range: B-9A-RI-CHEV (580-53290-2) at 10.0. Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### GC Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Definitions/Glossary

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53290-1

SDG: CVX 1001868

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits

### GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
*	RPD of the LCS and LCSD exceeds the control limits
H	Sample was prepped or analyzed beyond the specified holding time
X	Surrogate is outside control limits

### Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

## Glossary

### Abbreviation

**These commonly used abbreviations may or may not be present in this report.**

□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53290-1

SDG: CVX 1001868

## Client Sample ID: Trip Blanks

Date Collected: 09/14/15 00:00

Date Received: 09/14/15 13:30

## Lab Sample ID: 580-53290-1

Matrix: Water

### Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050		mg/L			09/20/15 21:35	1
<b>Surrogate</b>									
	%Recovery	Qualifier		Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90			50 - 150				09/20/15 21:35	1
Trifluorotoluene (Surr)	110			50 - 150				09/20/15 21:35	1

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TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53290-1

SDG: CVX 1001868

**Client Sample ID: B-9A-RI-CHEV**

**Lab Sample ID: 580-53290-2**

**Matrix: Water**

Date Collected: 09/14/15 11:00

Date Received: 09/14/15 13:30

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			09/25/15 19:35	1
Ethylbenzene	ND		3.0		ug/L			09/25/15 19:35	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/25/15 19:35	1
m-Xylene & p-Xylene	ND		3.0		ug/L			09/25/15 19:35	1
o-Xylene	ND		2.0		ug/L			09/25/15 19:35	1
Toluene	ND		2.0		ug/L			09/25/15 19:35	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	101			75 - 120				09/25/15 19:35	1
Dibromofluoromethane (Surr)	103			85 - 115				09/25/15 19:35	1
1,2-Dichloroethane-d4 (Surr)	109			70 - 120				09/25/15 19:35	1
Toluene-d8 (Surr)	101			85 - 120				09/25/15 19:35	1
Trifluorotoluene (Surr)	103			70 - 136				09/25/15 19:35	1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	0.40		0.012		ug/L		09/17/15 17:01	10/01/15 00:22	1
2-Methylnaphthalene	ND		0.016		ug/L		09/17/15 17:01	10/01/15 00:22	1
Benzo[a]anthracene	0.042		0.012		ug/L		09/17/15 17:01	10/01/15 00:22	1
Chrysene	0.069		0.012		ug/L		09/17/15 17:01	10/01/15 00:22	1
Benzo[a]pyrene	0.043 *		0.012		ug/L		09/17/15 17:01	10/01/15 00:22	1
Indeno[1,2,3-cd]pyrene	ND		0.012		ug/L		09/17/15 17:01	10/01/15 00:22	1
Dibenz(a,h)anthracene	ND		0.012		ug/L		09/17/15 17:01	10/01/15 00:22	1
Benzo[g,h,i]perylene	ND *		0.012		ug/L		09/17/15 17:01	10/01/15 00:22	1
Benzo[b]fluoranthene	0.082		0.012		ug/L		09/17/15 17:01	10/01/15 00:22	1
Benzo[k]fluoranthene	0.031		0.012		ug/L		09/17/15 17:01	10/01/15 00:22	1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
1-Methylnaphthalene	53		0.12		ug/L		09/17/15 17:01	10/24/15 18:13	10	
Acenaphthylene	0.46		0.12		ug/L		09/17/15 17:01	10/24/15 18:13	10	
Acenaphthene	1.6		0.12		ug/L		09/17/15 17:01	10/24/15 18:13	10	
Fluorene	6.0		0.12		ug/L		09/17/15 17:01	10/24/15 18:13	10	
Phenanthrene	4.4		1.2		ug/L		09/17/15 17:01	10/24/15 18:13	10	
Anthracene	ND *		0.31		ug/L		09/17/15 17:01	10/24/15 18:13	10	
Fluoranthene	ND		0.62		ug/L		09/17/15 17:01	10/24/15 18:13	10	
Pyrene	ND		0.62		ug/L		09/17/15 17:01	10/24/15 18:13	10	
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>	
Terphenyl-d14	67			64 - 150				09/17/15 17:01	10/24/15 18:13	10

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Naphthalene	ND	H	0.95		ug/L			10/10/15 11:07	10/23/15 18:03	100
2-Methylnaphthalene	ND	H	1.2		ug/L			10/10/15 11:07	10/23/15 18:03	100
1-Methylnaphthalene	91 H		0.95		ug/L			10/10/15 11:07	10/23/15 18:03	100
Acenaphthylene	ND	H	0.95		ug/L			10/10/15 11:07	10/23/15 18:03	100
Acenaphthene	3.8 H		0.95		ug/L			10/10/15 11:07	10/23/15 18:03	100
Fluorene	9.5 H		0.95		ug/L			10/10/15 11:07	10/23/15 18:03	100
Phenanthrene	ND	H	9.5		ug/L			10/10/15 11:07	10/23/15 18:03	100

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53290-1

SDG: CVX 1001868

**Client Sample ID: B-9A-RI-CHEV**

**Lab Sample ID: 580-53290-2**

**Matrix: Water**

Date Collected: 09/14/15 11:00

Date Received: 09/14/15 13:30

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) - RE (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Anthracene	ND	H	2.4		ug/L		10/10/15 11:07	10/23/15 18:03	100
Fluoranthene	ND	H	4.7		ug/L		10/10/15 11:07	10/23/15 18:03	100
Pyrene	ND	H	4.7		ug/L		10/10/15 11:07	10/23/15 18:03	100
Benzo[a]anthracene	ND	H	0.95		ug/L		10/10/15 11:07	10/23/15 18:03	100
Chrysene	ND	H	0.95		ug/L		10/10/15 11:07	10/23/15 18:03	100
Benzo[a]pyrene	ND	H	0.95		ug/L		10/10/15 11:07	10/23/15 18:03	100
Indeno[1,2,3-cd]pyrene	ND	H	0.95		ug/L		10/10/15 11:07	10/23/15 18:03	100
Dibenz(a,h)anthracene	ND	H	0.95		ug/L		10/10/15 11:07	10/23/15 18:03	100
Benzo[g,h,i]perylene	ND	H	0.95		ug/L		10/10/15 11:07	10/23/15 18:03	100
Benzo[b]fluoranthene	ND	H	0.95		ug/L		10/10/15 11:07	10/23/15 18:03	100
Benzo[k]fluoranthene	ND	H	0.95		ug/L		10/10/15 11:07	10/23/15 18:03	100
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Terphenyl-d14	62	X	64 - 150				10/10/15 11:07	10/23/15 18:03	100

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	1.0		0.050		mg/L			09/21/15 04:45	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	117		50 - 150					09/21/15 04:45	1
Trifluorotoluene (Surr)	106		50 - 150					09/21/15 04:45	1

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	8.7		0.10		mg/L		09/23/15 09:06	09/24/15 00:59	1
Motor Oil (>C24-C36)	2.6		0.24		mg/L		09/23/15 09:06	09/24/15 00:59	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
o-Terphenyl	118		50 - 150				09/23/15 09:06	09/24/15 00:59	1

## Method: 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	3.3		0.50		ng/L		09/23/15 16:50	09/24/15 13:47	1

## Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.032		0.0050		mg/L		09/28/15 13:00	09/29/15 00:12	5
Barium	0.15		0.0060		mg/L		09/28/15 13:00	09/29/15 00:12	5
Cadmium	ND		0.0020		mg/L		09/28/15 13:00	09/29/15 00:12	5
Chromium	0.0070		0.0020		mg/L		09/28/15 13:00	09/29/15 00:12	5
Copper	ND		0.010		mg/L		09/28/15 13:00	09/29/15 00:12	5
Lead	0.0044		0.0020		mg/L		09/28/15 13:00	09/29/15 00:12	5
Manganese	3.1		0.010		mg/L		09/28/15 13:00	09/29/15 00:12	5
Selenium	ND		0.0050		mg/L		09/28/15 13:00	09/29/15 00:12	5
Silver	ND		0.0020		mg/L		09/28/15 13:00	09/29/15 00:12	5
Zinc	ND		0.035		mg/L		09/28/15 13:00	09/29/15 00:12	5

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53290-1

SDG: CVX 1001868

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 580-201735/4**

**Matrix: Water**

**Analysis Batch: 201735**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		2.0		ug/L			09/25/15 13:24	1
Ethylbenzene	ND		3.0		ug/L			09/25/15 13:24	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/25/15 13:24	1
m-Xylene & p-Xylene	ND		3.0		ug/L			09/25/15 13:24	1
o-Xylene	ND		2.0		ug/L			09/25/15 13:24	1
Toluene	ND		2.0		ug/L			09/25/15 13:24	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	107		75 - 120		09/25/15 13:24	1
Dibromofluoromethane (Surr)	112		85 - 115		09/25/15 13:24	1
1,2-Dichloroethane-d4 (Surr)	123	X	70 - 120		09/25/15 13:24	1
Toluene-d8 (Surr)	107		85 - 120		09/25/15 13:24	1
Trifluorotoluene (Surr)	102		70 - 136		09/25/15 13:24	1

**Lab Sample ID: LCS 580-201735/5**

**Matrix: Water**

**Analysis Batch: 201735**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike	LCS	LCS	D	%Rec	%Rec.	Limits
	Added	Result	Qualifier				
Benzene	20.1	21.1		ug/L	105	80 - 120	
Ethylbenzene	20.1	22.6		ug/L	112	75 - 125	
Methyl tert-butyl ether	20.0	23.8		ug/L	119	65 - 125	
m-Xylene & p-Xylene	20.0	22.9		ug/L	114	75 - 130	
o-Xylene	20.0	23.2		ug/L	116	80 - 120	
Toluene	20.0	21.1		ug/L	105	75 - 120	

Surrogate	LCSD	LCSD	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	99		75 - 120			
Dibromofluoromethane (Surr)	110		85 - 115			
1,2-Dichloroethane-d4 (Surr)	117		70 - 120			
Toluene-d8 (Surr)	100		85 - 120			
Trifluorotoluene (Surr)	101		70 - 136			

**Lab Sample ID: LCSD 580-201735/6**

**Matrix: Water**

**Analysis Batch: 201735**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike	LCSD	LCSD	D	%Rec	%Rec.	RPD	RPD Limit
	Added	Result	Qualifier					
Benzene	20.1	21.4		ug/L	107	80 - 120	1	30
Ethylbenzene	20.1	23.3		ug/L	116	75 - 125	3	30
Methyl tert-butyl ether	20.0	22.4		ug/L	112	65 - 125	6	30
m-Xylene & p-Xylene	20.0	23.4		ug/L	117	75 - 130	2	30
o-Xylene	20.0	23.9		ug/L	119	80 - 120	3	30
Toluene	20.0	21.6		ug/L	108	75 - 120	2	30

Surrogate	LCSD	LCSD	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	98		75 - 120			

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53290-1

SDG: CVX 1001868

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID:** LCSD 580-201735/6

**Matrix:** Water

**Analysis Batch:** 201735

**Client Sample ID:** Lab Control Sample Dup

**Prep Type:** Total/NA

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Dibromofluoromethane (Surr)	109		85 - 115
1,2-Dichloroethane-d4 (Surr)	111		70 - 120
Toluene-d8 (Surr)	98		85 - 120
Trifluorotoluene (Surr)	99		70 - 136

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

**Lab Sample ID:** MB 580-201093/1-A

**Matrix:** Water

**Analysis Batch:** 202181

**Client Sample ID:** Method Blank

**Prep Type:** Total/NA

**Prep Batch:** 201093

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	MB Result	MB Qualifier	RL	MDL	Unit		Prepared	Analyzed	
Naphthalene	ND		0.010		ug/L	09/17/15 17:01	09/30/15 18:36		1
2-Methylnaphthalene	ND		0.013		ug/L	09/17/15 17:01	09/30/15 18:36		1
1-Methylnaphthalene	ND		0.010		ug/L	09/17/15 17:01	09/30/15 18:36		1
Acenaphthylene	ND		0.010		ug/L	09/17/15 17:01	09/30/15 18:36		1
Acenaphthene	ND		0.010		ug/L	09/17/15 17:01	09/30/15 18:36		1
Fluorene	ND		0.010		ug/L	09/17/15 17:01	09/30/15 18:36		1
Phenanthrene	ND		0.10		ug/L	09/17/15 17:01	09/30/15 18:36		1
Anthracene	ND		0.025		ug/L	09/17/15 17:01	09/30/15 18:36		1
Fluoranthene	ND		0.050		ug/L	09/17/15 17:01	09/30/15 18:36		1
Pyrene	ND		0.050		ug/L	09/17/15 17:01	09/30/15 18:36		1
Benzo[a]anthracene	ND		0.010		ug/L	09/17/15 17:01	09/30/15 18:36		1
Chrysene	ND		0.010		ug/L	09/17/15 17:01	09/30/15 18:36		1
Benzo[a]pyrene	ND		0.010		ug/L	09/17/15 17:01	09/30/15 18:36		1
Indeno[1,2,3-cd]pyrene	ND		0.010		ug/L	09/17/15 17:01	09/30/15 18:36		1
Dibenz(a,h)anthracene	ND		0.010		ug/L	09/17/15 17:01	09/30/15 18:36		1
Benzo[g,h,i]perylene	ND		0.010		ug/L	09/17/15 17:01	09/30/15 18:36		1
Benzo[b]fluoranthene	ND		0.010		ug/L	09/17/15 17:01	09/30/15 18:36		1
Benzo[k]fluoranthene	ND		0.010		ug/L	09/17/15 17:01	09/30/15 18:36		1
Surrogate	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Terphenyl-d14	102			64 - 150			09/17/15 17:01	09/30/15 18:36	1

**Lab Sample ID:** LCS 580-201093/2-A

**Matrix:** Water

**Analysis Batch:** 202181

**Client Sample ID:** Lab Control Sample

**Prep Type:** Total/NA

**Prep Batch:** 201093

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits	%Rec.
	Added	Result	Qualifier	Unit				
Naphthalene	1.00	0.776		ug/L	78	54 - 106		
2-Methylnaphthalene	1.00	0.823		ug/L	82	54 - 114		
1-Methylnaphthalene	1.00	0.818		ug/L	82	57 - 115		
Acenaphthylene	1.00	0.344		ug/L	34	30 - 127		
Acenaphthene	1.00	0.744		ug/L	74	54 - 109		
Fluorene	1.00	0.831		ug/L	83	50 - 130		
Phenanthrene	1.00	0.863		ug/L	86	53 - 115		
Anthracene	1.00	0.223 *		ug/L	22	30 - 130		

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53290-1

SDG: CVX 1001868

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

**Lab Sample ID: LCS 580-201093/2-A**

**Matrix: Water**

**Analysis Batch: 202181**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 201093**

**%Rec.**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Fluoranthene	1.00	0.777		ug/L	78	58 - 128	
Pyrene	1.00	0.697		ug/L	70	53 - 121	
Benzo[a]anthracene	1.00	0.582		ug/L	58	35 - 125	
Chrysene	1.00	0.833		ug/L	83	57 - 120	
Benzo[a]pyrene	1.00	0.100	*	ug/L	10	30 - 127	
Indeno[1,2,3-cd]pyrene	1.00	0.933		ug/L	93	53 - 131	
Dibenz(a,h)anthracene	1.00	1.07		ug/L	107	60 - 136	
Benzo[g,h,i]perylene	1.00	0.896		ug/L	90	51 - 128	
Benzo[b]fluoranthene	1.00	0.993		ug/L	99	59 - 126	
Benzo[k]fluoranthene	1.00	0.908		ug/L	91	49 - 136	
<b>Surrogate</b>		<b>LCS</b>	<b>LCS</b>				
<i>Terphenyl-d14</i>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			
		91		64 - 150			

**Lab Sample ID: LCSD 580-201093/3-A**

**Matrix: Water**

**Analysis Batch: 202181**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 201093**

**%Rec.**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Naphthalene	1.00	0.758		ug/L	76	54 - 106		2	20
2-Methylnaphthalene	1.00	0.802		ug/L	80	54 - 114		3	20
1-Methylnaphthalene	1.00	0.799		ug/L	80	57 - 115		2	20
Acenaphthylene	1.00	0.299		ug/L	30	30 - 127		14	20
Acenaphthene	1.00	0.705		ug/L	70	54 - 109		5	20
Fluorene	1.00	0.812		ug/L	81	50 - 130		2	20
Phenanthrene	1.00	0.829		ug/L	83	53 - 115		4	20
Anthracene	1.00	0.256	*	ug/L	26	30 - 130		14	20
Fluoranthene	1.00	0.737		ug/L	74	58 - 128		5	20
Pyrene	1.00	0.633		ug/L	63	53 - 121		10	20
Benzo[a]anthracene	1.00	0.552		ug/L	55	35 - 125		5	20
Chrysene	1.00	0.800		ug/L	80	57 - 120		4	20
Benzo[a]pyrene	1.00	ND	*	ug/L	0	30 - 127		200	20
Indeno[1,2,3-cd]pyrene	1.00	0.779		ug/L	78	53 - 131		18	20
Dibenz(a,h)anthracene	1.00	0.930		ug/L	93	60 - 136		14	20
Benzo[g,h,i]perylene	1.00	0.442	*	ug/L	44	51 - 128		68	20
Benzo[b]fluoranthene	1.00	0.893		ug/L	89	59 - 126		11	20
Benzo[k]fluoranthene	1.00	0.795		ug/L	79	49 - 136		13	20
<b>Surrogate</b>		<b>LCSD</b>	<b>LCSD</b>						
<i>Terphenyl-d14</i>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>					
		87		64 - 150					

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53290-1

SDG: CVX 1001868

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) - RE

**Lab Sample ID: MB 580-202974/1-A**

**Matrix: Water**

**Analysis Batch: 204037**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 202974**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene - RE	ND		0.010		ug/L				1
2-Methylnaphthalene - RE	ND		0.013		ug/L	10/10/15 11:07	10/22/15 14:18		1
1-Methylnaphthalene - RE	ND		0.010		ug/L	10/10/15 11:07	10/22/15 14:18		1
Acenaphthylene - RE	ND		0.010		ug/L	10/10/15 11:07	10/22/15 14:18		1
Acenaphthene - RE	ND		0.010		ug/L	10/10/15 11:07	10/22/15 14:18		1
Fluorene - RE	ND		0.010		ug/L	10/10/15 11:07	10/22/15 14:18		1
Phenanthrene - RE	ND		0.10		ug/L	10/10/15 11:07	10/22/15 14:18		1
Anthracene - RE	ND		0.025		ug/L	10/10/15 11:07	10/22/15 14:18		1
Fluoranthene - RE	ND		0.050		ug/L	10/10/15 11:07	10/22/15 14:18		1
Pyrene - RE	ND		0.050		ug/L	10/10/15 11:07	10/22/15 14:18		1
Benzo[a]anthracene - RE	ND		0.010		ug/L	10/10/15 11:07	10/22/15 14:18		1
Chrysene - RE	ND		0.010		ug/L	10/10/15 11:07	10/22/15 14:18		1
Benzo[a]pyrene - RE	ND		0.010		ug/L	10/10/15 11:07	10/22/15 14:18		1
Indeno[1,2,3-cd]pyrene - RE	ND		0.010		ug/L	10/10/15 11:07	10/22/15 14:18		1
Dibenz(a,h)anthracene - RE	ND		0.010		ug/L	10/10/15 11:07	10/22/15 14:18		1
Benzo[g,h,i]perylene - RE	ND		0.010		ug/L	10/10/15 11:07	10/22/15 14:18		1
Benzo[b]fluoranthene - RE	ND		0.010		ug/L	10/10/15 11:07	10/22/15 14:18		1
Benzo[k]fluoranthene - RE	ND		0.010		ug/L	10/10/15 11:07	10/22/15 14:18		1

Surrogate	MB %Recovery	MB Qualifier	MB Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14 - RE	64		64 - 150	10/10/15 11:07	10/22/15 14:18	1

**Lab Sample ID: LCS 580-202974/2-A**

**Matrix: Water**

**Analysis Batch: 204037**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 202974**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	Limits
Naphthalene - RE	1.00	0.658		ug/L		66	54 - 106	
2-Methylnaphthalene - RE	1.00	0.685		ug/L		68	54 - 114	
1-Methylnaphthalene - RE	1.00	0.699		ug/L		70	57 - 115	
Acenaphthylene - RE	1.00	0.625		ug/L		63	30 - 127	
Acenaphthene - RE	1.00	0.652		ug/L		65	54 - 109	
Fluorene - RE	1.00	0.676		ug/L		68	50 - 130	
Phenanthrene - RE	1.00	0.740		ug/L		74	53 - 115	
Anthracene - RE	1.00	0.439		ug/L		44	30 - 130	
Fluoranthene - RE	1.00	0.685		ug/L		68	58 - 128	
Pyrene - RE	1.00	0.648		ug/L		65	53 - 121	
Benzo[a]anthracene - RE	1.00	0.629		ug/L		63	35 - 125	
Chrysene - RE	1.00	0.772		ug/L		77	57 - 120	
Benzo[a]pyrene - RE	1.00	0.471		ug/L		47	30 - 127	
Indeno[1,2,3-cd]pyrene - RE	1.00	0.892		ug/L		89	53 - 131	
Dibenz(a,h)anthracene - RE	1.00	0.941		ug/L		94	60 - 136	
Benzo[g,h,i]perylene - RE	1.00	0.861		ug/L		86	51 - 128	
Benzo[b]fluoranthene - RE	1.00	0.863		ug/L		86	59 - 126	
Benzo[k]fluoranthene - RE	1.00	0.885		ug/L		88	49 - 136	

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53290-1

SDG: CVX 1001868

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) - RE (Continued)

**Lab Sample ID:** LCS 580-202974/2-A

**Matrix:** Water

**Analysis Batch:** 204037

**Client Sample ID:** Lab Control Sample

**Prep Type:** Total/NA

**Prep Batch:** 202974

Surrogate	LCS	LCS	%Recovery	Qualifier	Limits
Terphenyl-d14 - RE			74		64 - 150

**Lab Sample ID:** LCSD 580-202974/3-A

**Matrix:** Water

**Analysis Batch:** 204037

**Client Sample ID:** Lab Control Sample Dup

**Prep Type:** Total/NA

**Prep Batch:** 202974

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec.	Limits	RPD	Limit
Naphthalene - RE	1.00	0.724		ug/L	72	54 - 106	10	20	
2-Methylnaphthalene - RE	1.00	0.747		ug/L	75	54 - 114	9	20	
1-Methylnaphthalene - RE	1.00	0.775		ug/L	78	57 - 115	10	20	
Acenaphthylene - RE	1.00	0.680		ug/L	68	30 - 127	8	20	
Acenaphthene - RE	1.00	0.720		ug/L	72	54 - 109	10	20	
Fluorene - RE	1.00	0.735		ug/L	74	50 - 130	8	20	
Phenanthrene - RE	1.00	0.791		ug/L	79	53 - 115	7	20	
Anthracene - RE	1.00	0.466		ug/L	47	30 - 130	6	20	
Fluoranthene - RE	1.00	0.707		ug/L	71	58 - 128	3	20	
Pyrene - RE	1.00	0.674		ug/L	67	53 - 121	4	20	
Benzo[a]anthracene - RE	1.00	0.670		ug/L	67	35 - 125	6	20	
Chrysene - RE	1.00	0.826		ug/L	83	57 - 120	7	20	
Benzo[a]pyrene - RE	1.00	0.475		ug/L	47	30 - 127	1	20	
Indeno[1,2,3-cd]pyrene - RE	1.00	0.962		ug/L	96	53 - 131	8	20	
Dibenz(a,h)anthracene - RE	1.00	1.01		ug/L	101	60 - 136	7	20	
Benzo[g,h,i]perylene - RE	1.00	0.922		ug/L	92	51 - 128	7	20	
Benzo[b]fluoranthene - RE	1.00	0.925		ug/L	92	59 - 126	7	20	
Benzo[k]fluoranthene - RE	1.00	0.922		ug/L	92	49 - 136	4	20	

Surrogate	LCSD	LCSD	%Recovery	Qualifier	Limits
Terphenyl-d14 - RE			75		64 - 150

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

**Lab Sample ID:** MB 580-201281/5

**Matrix:** Water

**Analysis Batch:** 201281

**Client Sample ID:** Method Blank

**Prep Type:** Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050		mg/L			09/20/15 17:44	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		50 - 150					09/20/15 17:44	1
Trifluorotoluene (Surr)	112		50 - 150					09/20/15 17:44	1

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# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53290-1

SDG: CVX 1001868

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC) (Continued)

**Lab Sample ID: LCS 580-201281/6**

**Matrix: Water**

**Analysis Batch: 201281**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.
Gasoline	1.16	1.09		mg/L		94	79 - 110
Surrogate	%Recovery	LCS Qualifier	Limits				Limits
4-Bromofluorobenzene (Surr)	98		50 - 150				
Trifluorotoluene (Surr)	117		50 - 150				

**Lab Sample ID: LCSD 580-201281/7**

**Matrix: Water**

**Analysis Batch: 201281**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.	RPD
Gasoline	1.16	1.09		mg/L		93	79 - 110	1
Surrogate	%Recovery	LCSD Qualifier	Limits				Limits	RPD
4-Bromofluorobenzene (Surr)	98		50 - 150					
Trifluorotoluene (Surr)	117		50 - 150					

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

**Lab Sample ID: MB 580-201493/1-A**

**Matrix: Water**

**Analysis Batch: 201519**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 201493**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.11		mg/L		09/23/15 09:06	09/23/15 22:53	1
Motor Oil (>C24-C36)	ND		0.25		mg/L		09/23/15 09:06	09/23/15 22:53	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	54		50 - 150				09/23/15 09:06	09/23/15 22:53	1

**Lab Sample ID: LCS 580-201493/2-A**

**Matrix: Water**

**Analysis Batch: 201519**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 201493**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.
#2 Diesel (C10-C24)	0.500	0.470		mg/L		94	59 - 120
Motor Oil (>C24-C36)	0.502	0.501		mg/L		100	71 - 140
Surrogate	%Recovery	LCS Qualifier	Limits				Limits
o-Terphenyl	91		50 - 150				

**Lab Sample ID: LCSD 580-201493/3-A**

**Matrix: Water**

**Analysis Batch: 201519**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 201493**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.	RPD
#2 Diesel (C10-C24)	0.500	0.458		mg/L		92	59 - 120	2

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53290-1

SDG: CVX 1001868

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

**Lab Sample ID: LCSD 580-201493/3-A**

**Matrix: Water**

**Analysis Batch: 201519**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 201493**

**%Rec.**

**RPD**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit mg/L	D	%Rec	Limits	RPD	Limit
Motor Oil (>C24-C36)	0.502	0.500				100	71 - 140	0	27
<hr/>									
<i>Surrogate</i>									
<i>o-Terphenyl</i>									

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53290-1

SDG: CVX 1001868

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: MB 580-201911/20-A**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 201911**

Analyte	MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Manganese	ND		0.010		mg/L		09/28/15 13:00	09/28/15 22:18	5
Selenium	ND		0.0050		mg/L		09/28/15 13:00	09/28/15 22:18	5
Silver	ND		0.0020		mg/L		09/28/15 13:00	09/28/15 22:18	5
Zinc	ND		0.035		mg/L		09/28/15 13:00	09/28/15 22:18	5

**Lab Sample ID: LCS 580-201911/21-A**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 201911**

**%Rec.**

Analyte	Spike		LCS Result	LCS Qualifier	Unit	D	%Rec	Limits	
	Added								
Arsenic	4.00		4.10		mg/L		102	80 - 120	
Barium	4.00		4.21		mg/L		105	80 - 120	
Cadmium	0.100		0.104		mg/L		104	80 - 120	
Chromium	0.400		0.393		mg/L		98	80 - 120	
Copper	0.500		0.500		mg/L		100	80 - 120	
Lead	1.00		0.939		mg/L		94	80 - 120	
Manganese	1.00		1.01		mg/L		101	80 - 120	
Selenium	4.00		4.25		mg/L		106	80 - 120	
Silver	0.600		0.588		mg/L		98	80 - 120	
Zinc	4.00		4.03		mg/L		101	80 - 120	

**Lab Sample ID: LCSD 580-201911/22-A**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 201911**

**%Rec.**

Analyte	Spike		LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
	Added									
Arsenic	4.00		4.07		mg/L		102	80 - 120	1	20
Barium	4.00		4.14		mg/L		103	80 - 120	2	20
Cadmium	0.100		0.104		mg/L		104	80 - 120	0	20
Chromium	0.400		0.392		mg/L		98	80 - 120	0	20
Copper	0.500		0.502		mg/L		100	80 - 120	0	20
Lead	1.00		0.930		mg/L		93	80 - 120	1	20
Manganese	1.00		1.01		mg/L		101	80 - 120	0	20
Selenium	4.00		4.21		mg/L		105	80 - 120	1	20
Silver	0.600		0.582		mg/L		97	80 - 120	1	20
Zinc	4.00		4.01		mg/L		100	80 - 120	1	20

**Lab Sample ID: 580-53364-D-9-C MS**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Matrix Spike**

**Prep Type: Total/NA**

**Prep Batch: 201911**

**%Rec.**

Analyte	Sample		Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits	
	Result	Qualifier								
Arsenic	0.015		4.00	4.10		mg/L		102	80 - 120	
Barium	0.097		4.00	4.22		mg/L		103	80 - 120	
Cadmium	ND		0.100	0.103		mg/L		103	80 - 120	
Chromium	0.0040		0.400	0.402		mg/L		100	80 - 120	
Copper	ND		0.500	0.509		mg/L		102	80 - 120	
Lead	ND		1.00	0.957		mg/L		96	80 - 120	
Manganese	6.0		1.00	6.41	4	mg/L		39	80 - 120	

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53290-1

SDG: CVX 1001868

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: 580-53364-D-9-C MS**

**Matrix: Water**

**Analysis Batch: 201970**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	Limits		
	Result	Qualifier	Added	Result	Qualifier						
Selenium	ND		4.00	4.27		mg/L		107	80 - 120		
Silver	ND		0.600	0.581		mg/L		97	80 - 120		
Zinc	ND		4.00	4.07		mg/L		101	80 - 120		

**Lab Sample ID: 580-53364-D-9-D MSD**

**Matrix: Water**

**Analysis Batch: 201970**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	Limits		RPD
	Result	Qualifier	Added	Result	Qualifier						
Arsenic	0.015		4.00	4.38		mg/L		109	80 - 120		7
Barium	0.097		4.00	4.55		mg/L		111	80 - 120		8
Cadmium	ND		0.100	0.113		mg/L		113	80 - 120		10
Chromium	0.0040		0.400	0.434		mg/L		108	80 - 120		8
Copper	ND		0.500	0.541		mg/L		108	80 - 120		6
Lead	ND		1.00	1.02		mg/L		102	80 - 120		7
Manganese	6.0		1.00	6.94	4	mg/L		92	80 - 120		8
Selenium	ND		4.00	4.44		mg/L		111	80 - 120		4
Silver	ND		0.600	0.613		mg/L		102	80 - 120		5
Zinc	ND		4.00	4.35		mg/L		108	80 - 120		7

**Lab Sample ID: 580-53364-D-9-B DU**

**Matrix: Water**

**Analysis Batch: 201970**

Analyte	Sample	Sample	DU	DU	Unit	D			RPD	Limit
	Result	Qualifier	Result	Qualifier						
Arsenic	0.015		0.0147		mg/L				2	20
Barium	0.097		0.0981		mg/L				1	20
Cadmium	ND		ND		mg/L				NC	20
Chromium	0.0040		0.00364		mg/L				9	20
Copper	ND		ND		mg/L				NC	20
Lead	ND		ND		mg/L				NC	20
Manganese	6.0		6.06		mg/L				0.6	20
Selenium	ND		ND		mg/L				NC	20
Silver	ND		ND		mg/L				NC	20
Zinc	ND		ND		mg/L				NC	20

**Client Sample ID: Duplicate**

**Prep Type: Total/NA**

**Prep Batch: 201911**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total/NA**

**Prep Batch: 201911**

# Lab Chronicle

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53290-1

SDG: CVX 1001868

**Client Sample ID: Trip Blanks**

**Date Collected: 09/14/15 00:00**

**Date Received: 09/14/15 13:30**

**Lab Sample ID: 580-53290-1**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	NWTPH-Gx		1	201281	09/20/15 21:35	HDK	TAL SEA

**Client Sample ID: B-9A-RI-CHEV**

**Date Collected: 09/14/15 11:00**

**Date Received: 09/14/15 13:30**

**Lab Sample ID: 580-53290-2**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	201735	09/25/15 19:35	K1K	TAL SEA
Total/NA	Prep	3520C			201093	09/17/15 17:01	JDR	TAL SEA
Total/NA	Analysis	8270C SIM		1	202181	10/01/15 00:22	ERZ	TAL SEA
Total/NA	Prep	3520C	RE		202974	10/10/15 11:07	JDR	TAL SEA
Total/NA	Analysis	8270C SIM	RE	100	204128	10/23/15 18:03	ERZ	TAL SEA
Total/NA	Prep	3520C	DL		201093	09/17/15 17:01	JDR	TAL SEA
Total/NA	Analysis	8270C SIM	DL	10	204170	10/24/15 18:13	ERZ	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	201281	09/21/15 04:45	HDK	TAL SEA
Total/NA	Prep	3510C			201493	09/23/15 09:06	DCC	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	201519	09/24/15 00:59	KW	TAL SEA
Total/NA	Prep	1631E			198876	09/23/15 16:50	DSH	TAL CAN
Total/NA	Analysis	1631E		1	198972	09/24/15 13:47	DSH	TAL CAN
Total/NA	Prep	3010A			201911	09/28/15 13:00	PAB	TAL SEA
Total/NA	Analysis	6020		5	201970	09/29/15 00:12	FCW	TAL SEA

## Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

TestAmerica Seattle

## Certification Summary

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53290-1

SDG: CVX 1001868

### Laboratory: TestAmerica Seattle

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-022	03-02-16
California	State Program	9	2901	01-31-17
L-A-B	DoD ELAP		L2236	01-19-16
L-A-B	ISO/IEC 17025		L2236	01-19-16
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-06-16
US Fish & Wildlife	Federal		LE058448-0	02-28-16
USDA	Federal		P330-14-00126	04-08-17
Washington	State Program	10	C553	02-17-16

### Laboratory: TestAmerica Canton

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	NELAP	9	01144CA	06-30-14 *
California	State Program	9	2927	04-30-17
Connecticut	State Program	1	PH-0590	12-31-15
Illinois	NELAP	5	200004	07-31-16
Kansas	NELAP	7	E-10336	01-31-16 *
Kentucky (UST)	State Program	4	58	02-26-16
Kentucky (WW)	State Program	4	98016	12-31-15
L-A-B	DoD ELAP		L2315	07-18-16
Minnesota	NELAP	5	039-999-348	12-31-15
Nevada	State Program	9	OH-000482008A	07-31-16
New Jersey	NELAP	2	OH001	10-30-15 *
New York	NELAP	2	10975	03-31-16
Ohio VAP	State Program	5	CL0024	10-31-15 *
Oregon	NELAP	10	4062	02-23-16
Pennsylvania	NELAP	3	68-00340	08-31-16
Texas	NELAP	6	T104704517-15-5	08-31-16
USDA	Federal		P330-13-00319	11-26-16
Virginia	NELAP	3	460175	09-14-16
Washington	State Program	10	C971	01-12-16
West Virginia DEP	State Program	3	210	12-31-15
Wisconsin	State Program	5	999518190	08-31-16

\* Certification renewal pending - certification considered valid.

## Sample Summary

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53290-1

SDG: CVX 1001868

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-53290-1	Trip Blanks	Water	09/14/15 00:00	09/14/15 13:30
580-53290-2	B-9A-RI-CHEV	Water	09/14/15 11:00	09/14/15 13:30

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TestAmerica Seattle

Regulatory Program:  DW  NPDES  RCRA 580-53290 Chain of Custody

Client Contact		Project Manager: LYNN PENLEY		Site Cont. 11/14/15 (W)		COC No: _____ of _____ COCs																									
Company Name: ARCADIS		Tel/Fax: 503-220-8201 x1114		Lab Contact: SARA MURPHY		Sampler: _____																									
Address: 18 SW COLUMBIA ST SUITE 670 City/State/Zip: PORTLAND OR 97201 Phone: 503-220-8201 Fax: 503-220-8209 Project Name: GRCOS GW M Site: Willamette 1001868 PO #		Analysis Turnaround Time		Carrier: _____		For Lab Use Only:																									
		<input type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS				Walk-in Client: _____																									
		TAT if different from Below				Lab Sampling: _____																									
		<input checked="" type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day				Job / SDG No.: _____																									
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Sample Specific Notes:																								
TRIP BLANKS B-9A-RI-CHEV		—	—	W		12	XX XXXX XX																								
<p>PRESERVATION USED: <input type="checkbox"/> 1-Cu <input type="checkbox"/> 2-HCl <input type="checkbox"/> 3-H<sub>2</sub>SO<sub>4</sub> <input type="checkbox"/> 4-HNO<sub>3</sub> <input type="checkbox"/> 5-NaOH <input type="checkbox"/> 6-Other</p> <p>Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.</p> <p><input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown</p> <p>Special Instructions/QC Requirements &amp; Comments: * INCLUDING RCRA 8 + Zn + Cu ** INCLUDING Z-METHYLNAPHTHALENE PLEASE SEND REPORT TO BRIAN MARCUS@ARCADIS-US.COM + BRIAN.FLEMISTER@ARCADIS-US.COM</p> <table border="1"> <tr> <td>Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No</td> <td>Custody Seal No.:</td> <td colspan="2">Cooler Temp. (°C); Obs'd: _____</td> <td>Corr'd: _____</td> <td>Therm ID No.: _____</td> </tr> <tr> <td>Relinquished by: <i>Holly Okon</i></td> <td>Company: ARCADIS</td> <td>Date/Time: 9/14/15</td> <td>Received by: <i>Brian</i></td> <td>Company: M-E</td> <td>Date/Time: 9/14/15 1300</td> </tr> <tr> <td>Relinquished by: <i>Jessica Nye</i></td> <td>Company: M-E</td> <td>Date/Time: 9/14/15 1330</td> <td>Received by: <i>Brian</i></td> <td>Company: TPA</td> <td>Date/Time: 9/14/15 @ 1330</td> </tr> <tr> <td>Relinquished by:</td> <td>Company:</td> <td>Date/Time:</td> <td>Received in Laboratory by:</td> <td>Company:</td> <td>Date/Time:</td> </tr> </table>								Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No	Custody Seal No.:	Cooler Temp. (°C); Obs'd: _____		Corr'd: _____	Therm ID No.: _____	Relinquished by: <i>Holly Okon</i>	Company: ARCADIS	Date/Time: 9/14/15	Received by: <i>Brian</i>	Company: M-E	Date/Time: 9/14/15 1300	Relinquished by: <i>Jessica Nye</i>	Company: M-E	Date/Time: 9/14/15 1330	Received by: <i>Brian</i>	Company: TPA	Date/Time: 9/14/15 @ 1330	Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No	Custody Seal No.:	Cooler Temp. (°C); Obs'd: _____		Corr'd: _____	Therm ID No.: _____																										
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Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:																										

20.0 / C21.0

## **Chain of Custody Record**



**TestAmerica**

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Canton Sample Receipt Form/Narrative  
Canton Facility

Login # :

Client <u>Seattle</u>	Site Name _____	Cooler unpacked by: 
Cooler Received on <u>9-16-15</u>	Opened on <u>9/16/15</u>	
FedEx: 1 <sup>st</sup> Grd <input checked="" type="checkbox"/> Exp <input type="checkbox"/> UPS <input type="checkbox"/> FAS <input type="checkbox"/> Stetson	Client Drop Off <input type="checkbox"/> TestAmerica Courier <input type="checkbox"/> Other	

**Receipt After-hours: Drop-off Date/Time** Storage Location

TestAmerica Cooler # \_\_\_\_\_ Foam Box Client Cooler  Box Other \_\_\_\_\_  
 Packing material used: Bubble Wrap Foam Plastic Bag None Other \_\_\_\_\_  
 COOLANT: Wet Ice Blue Ice Dry Ice Water  None

1. Cooler temperature upon receipt  
 IR GUN# A (CF +1.0 °C) Observed Cooler Temp. 20.0 °C Corrected Cooler Temp. 21.0 °C  
 IR GUN# 4 (CF +0.5 °C) Observed Cooler Temp. \_\_\_\_\_ °C Corrected Cooler Temp. \_\_\_\_\_ °C  
 IR GUN# 5 (CF +0.4 °C) Observed Cooler Temp. \_\_\_\_\_ °C Corrected Cooler Temp. \_\_\_\_\_ °C  
 IR GUN# 8 (CF -1.5 °C) Observed Cooler Temp. \_\_\_\_\_ °C Corrected Cooler Temp. \_\_\_\_\_ °C
 

See Multiple Cooler Form
2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No  
 -Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels be reconciled with the COC? Yes No
9. Were correct bottle(s) used for the test(s) indicated? Yes No
10. Sufficient quantity received to perform indicated analyses? Yes No
11. Were sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC554612
12. Were VOAs on the COC? Yes No
13. Were air bubbles >6 mm in any VOA vials? Yes No NA
14. Was a trip blank present in the cooler(s)? Trip Blank Lot# Yes No

Contacted PM \_\_\_\_\_ Date \_\_\_\_\_ by \_\_\_\_\_ via Verbal Voice Mail Other \_\_\_\_\_  
 Concerning \_\_\_\_\_

**14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES**

Samples processed by:

**15. SAMPLE CONDITION**

Sample(s) \_\_\_\_\_ were received after the recommended holding time had expired.  
 Sample(s) \_\_\_\_\_ were received in a broken container.  
 Sample(s) \_\_\_\_\_ were received with bubble >6 mm in diameter. (Notify PM)

**16. SAMPLE PRESERVATION**

Sample(s) \_\_\_\_\_ were further preserved in the laboratory.  
 Time preserved: \_\_\_\_\_ Preservative(s) added/Lot number(s): \_\_\_\_\_

TestAmerica Pleasanton

1220 Quarry Lane  
Pleasanton, CA 94566  
Phone (925) 484-1919 Fax (925) 600-3002

## **Chain of Custody Record**



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)		Sampler:		Lab PM: Smith, Micah		Carrier Tracking No(s):		COC No: 720-25837.1		
Client Contact: Shipping/Receiving		Phone:		E-Mail: micah.smith@testamericainc.com				Page: Page 1 of 1		
Company: TestAmerica Laboratories, Inc.										
Address: 4101 Shuffel Street NW,		Due Date Requested: 9/28/2015		TAT Requested (days):		Analysis Requested				
City: North Canton										
State, Zip: OH, 44720										
Phone: 330-497-9396(Tel) 330-497-0772(Fax)		PO #:								
Email:		WO #:								
Project Name: St Creek		Project #: 72004735								
Site:		SSOW#:								
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, T=tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Total Number of containers	Special Instructions/Note:	
STCREEK OUT (720-67408-1)		9/15/15	10:10 Pacific		Water	X	X		Litter meth	
STCREEK EPI (720-67408-2)		9/15/15	11:10 Pacific		Water	X	X			
STCREEK EPI-MID (720-67408-3)		9/15/15	11:15 Pacific		Water	X				
STCREEK MID (720-67408-4)		9/15/15	11:20 Pacific		Water	X				
STCREEK MID-HYP (720-67408-5)		9/15/15	11:25 Pacific		Water	X				
STCREEK HYP (720-67408-6)		9/15/15	11:30 Pacific		Water	X	X			
Possible Hazard Identification										
Unconfirmed					Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)					
Deliverable Requested: I, II, III, IV, Other (specify)					<input type="checkbox"/> Return To Client	<input type="checkbox"/> Disposal By Lab	<input type="checkbox"/> Archive For	Months		
Empty Kit Relinquished by: <u>J. Brink</u> Date: <u>9/13/15 1525</u> Received by: <u>Alex Celani</u> Method of Shipment:										
Relinquished by:		Date/Time:	Company	Received by:	Date/Time:	Company				
Relinquished by:		Date/Time:	Company	Received by:	Date/Time:	Company				
Relinquished by:		Date/Time:	Company	Received by:	Date/Time:	Company				
Custody Seals Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:						

TestAmerica Canton Sample Receipt Form/Narrative  
Canton Facility

Login # :

Client TA Pleasanton Site Name \_\_\_\_\_  
 Cooler Received on 9/10/15 Opened on 9/10/15  
 FedEx: 1<sup>st</sup> Grd Ex UPS FAS Stetson Client Drop Off TestAmerica Courier Other

Cooler unpacked by:  
Alex Celen

Receipt After-hours: Drop-off Date/Time Storage Location

TestAmerica Cooler # \_\_\_\_\_ Foam Box Client Cooler Box Other \_\_\_\_\_  
 Packing material used: Bubble Wrap Foam Plastic Bag None Other \_\_\_\_\_  
 COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt  
 IR GUN# A (CF +1.0 °C) Observed Cooler Temp. 0.4 °C Corrected Cooler Temp. 1.4 °C  
 IR GUN# 4 (CF +0.5 °C) Observed Cooler Temp. \_\_\_\_\_ °C Corrected Cooler Temp. \_\_\_\_\_ °C  See Multiple Cooler Form  
 IR GUN# 5 (CF +0.4 °C) Observed Cooler Temp. \_\_\_\_\_ °C Corrected Cooler Temp. \_\_\_\_\_ °C  
 IR GUN# 8 (CF -1.5 °C) Observed Cooler Temp. \_\_\_\_\_ °C Corrected Cooler Temp. \_\_\_\_\_ °C
2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No  
 -Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA  
 -Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes (No)
7. Did all bottles arrive in good condition-(Unbroken)? Yes No
8. Could all bottle labels be reconciled with the COC? Yes No
9. Were correct bottle(s) used for the test(s) indicated? Yes No
10. Sufficient quantity received to perform indicated analyses? Yes No
11. Were sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC554612
12. Were VOAs on the COC? Yes No
13. Were air bubbles >6 mm in any VOA vials? Yes No NA
14. Was a trip blank present in the cooler(s)? Trip Blank Lot # \_\_\_\_\_ Yes (No)

Contacted PM \_\_\_\_\_ Date \_\_\_\_\_ by \_\_\_\_\_ via Verbal Voice Mail Other \_\_\_\_\_  
 Concerning \_\_\_\_\_

## 14. CHAIN OF CUSTODY &amp; SAMPLE DISCREPANCIES

Samples processed by:

## 15. SAMPLE CONDITION

Sample(s) \_\_\_\_\_ were received after the recommended holding time had expired.  
 Sample(s) \_\_\_\_\_ were received in a broken container.  
 Sample(s) \_\_\_\_\_ were received with bubble >6 mm in diameter. (Notify PM)

## 16. SAMPLE PRESERVATION

Sample(s) \_\_\_\_\_ were further preserved in the laboratory.  
 Time preserved: \_\_\_\_\_ Preservative(s) added/Lot number(s): \_\_\_\_\_

## Login Sample Receipt Checklist

Client: ARCADIS U.S. Inc

Job Number: 580-53290-1

SDG Number: CVX 1001868

**Login Number:** 53290

**List Source:** TestAmerica Seattle

**List Number:** 1

**Creator:** Svabik-Seror, Philip M

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	No name.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

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# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Seattle

5755 8th Street East

Tacoma, WA 98424

Tel: (253)922-2310

TestAmerica Job ID: 580-53488-1

Client Project/Site: 3Q2015 GWM B0045452.0018.00420

For:

ARCADIS U.S. Inc

111 SW Columbia Street

Suite 670

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Results relate only to the items tested and the sample(s) as received by the laboratory.

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# Case Narrative

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 GWM B0045452.0018.00420

TestAmerica Job ID: 580-53488-1

## Job ID: 580-53488-1

### Laboratory: TestAmerica Seattle

#### Narrative

#### Job Narrative 580-53488-1

#### Receipt

The samples were received on 9/21/2015 3:00 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.8° C.

#### GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### GC/MS Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### GC Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Definitions/Glossary

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 GWM B0045452.0018.00420

TestAmerica Job ID: 580-53488-1

## Glossary

**Abbreviation** These commonly used abbreviations may or may not be present in this report.

□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

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# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 GWM B0045452.0018.00420

TestAmerica Job ID: 580-53488-1

**Client Sample ID: Trip Blank**

Date Collected: 09/21/15 00:00

Date Received: 09/21/15 15:00

**Lab Sample ID: 580-53488-1**

Matrix: Water

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050		mg/L			09/28/15 15:37	1
<b>Surrogate</b>									
	%Recovery	Qualifier		Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92			50 - 150				09/28/15 15:37	1
Trifluorotoluene (Surr)	104			50 - 150				09/28/15 15:37	1

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 GWM B0045452.0018.00420

TestAmerica Job ID: 580-53488-1

**Client Sample ID: EB-RI-CHEV-1**

**Lab Sample ID: 580-53488-2**

**Matrix: Water**

Date Collected: 09/21/15 11:55

Date Received: 09/21/15 15:00

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			10/02/15 16:32	1
Ethylbenzene	ND		3.0		ug/L			10/02/15 16:32	1
Methyl tert-butyl ether	ND		1.0		ug/L			10/02/15 16:32	1
m-Xylene & p-Xylene	ND		3.0		ug/L			10/02/15 16:32	1
o-Xylene	ND		2.0		ug/L			10/02/15 16:32	1
Toluene	ND		2.0		ug/L			10/02/15 16:32	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	107			75 - 120				10/02/15 16:32	1
Dibromofluoromethane (Surr)	105			85 - 115				10/02/15 16:32	1
1,2-Dichloroethane-d4 (Surr)	110			70 - 120				10/02/15 16:32	1
Toluene-d8 (Surr)	98			85 - 120				10/02/15 16:32	1
Trifluorotoluene (Surr)	104			70 - 136				10/02/15 16:32	1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.011		ug/L		09/26/15 14:45	10/07/15 21:42	1
2-Methylnaphthalene	ND		0.014		ug/L		09/26/15 14:45	10/07/15 21:42	1
1-Methylnaphthalene	ND		0.011		ug/L		09/26/15 14:45	10/07/15 21:42	1
Acenaphthylene	ND		0.011		ug/L		09/26/15 14:45	10/07/15 21:42	1
Acenaphthene	ND		0.011		ug/L		09/26/15 14:45	10/07/15 21:42	1
Fluorene	ND		0.011		ug/L		09/26/15 14:45	10/07/15 21:42	1
Phenanthrene	ND		0.11		ug/L		09/26/15 14:45	10/07/15 21:42	1
Anthracene	ND		0.027		ug/L		09/26/15 14:45	10/07/15 21:42	1
Fluoranthene	ND		0.054		ug/L		09/26/15 14:45	10/07/15 21:42	1
Pyrene	ND		0.054		ug/L		09/26/15 14:45	10/07/15 21:42	1
Benzo[a]anthracene	ND		0.011		ug/L		09/26/15 14:45	10/07/15 21:42	1
Chrysene	ND		0.011		ug/L		09/26/15 14:45	10/07/15 21:42	1
Benzo[a]pyrene	ND		0.011		ug/L		09/26/15 14:45	10/07/15 21:42	1
Indeno[1,2,3-cd]pyrene	ND		0.011		ug/L		09/26/15 14:45	10/07/15 21:42	1
Dibenz(a,h)anthracene	ND		0.011		ug/L		09/26/15 14:45	10/07/15 21:42	1
Benzo[g,h,i]perylene	ND		0.011		ug/L		09/26/15 14:45	10/07/15 21:42	1
Benzo[b]fluoranthene	ND		0.011		ug/L		09/26/15 14:45	10/07/15 21:42	1
Benzo[k]fluoranthene	ND		0.011		ug/L		09/26/15 14:45	10/07/15 21:42	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Terphenyl-d14	84			64 - 150				09/26/15 14:45	10/07/15 21:42

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050		mg/L			09/28/15 20:35	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	92			50 - 150				09/28/15 20:35	1
Trifluorotoluene (Surr)	99			50 - 150				09/28/15 20:35	1

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.12		mg/L		09/30/15 11:07	10/10/15 10:47	1
Motor Oil (>C24-C36)	ND		0.26		mg/L		09/30/15 11:07	10/10/15 10:47	1

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 GWM B0045452.0018.00420

TestAmerica Job ID: 580-53488-1

**Client Sample ID: EB-RI-CHEV-1**

Date Collected: 09/21/15 11:55

Date Received: 09/21/15 15:00

**Lab Sample ID: 580-53488-2**

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o-Terphenyl</i>	83		50 - 150	09/30/15 11:07	10/10/15 10:47	1

**Method: 1631E - Mercury, Low Level (CVAFS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.50		ng/L	D	09/28/15 10:30	09/29/15 16:43	1

**Method: 6020 - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0050		mg/L	D	09/28/15 13:59	09/29/15 02:16	5
Barium	ND		0.0060		mg/L	D	09/28/15 13:59	09/29/15 02:16	5
Cadmium	ND		0.0020		mg/L	D	09/28/15 13:59	09/29/15 02:16	5
Chromium	ND		0.0020		mg/L	D	09/28/15 13:59	09/29/15 02:16	5
Copper	ND		0.010		mg/L	D	09/28/15 13:59	09/29/15 02:16	5
Lead	ND		0.0020		mg/L	D	09/28/15 13:59	09/29/15 02:16	5
Manganese	ND		0.010		mg/L	D	09/28/15 13:59	09/29/15 02:16	5
Selenium	ND		0.0050		mg/L	D	09/28/15 13:59	09/29/15 02:16	5
Silver	ND		0.0020		mg/L	D	09/28/15 13:59	09/29/15 02:16	5
Zinc	ND		0.035		mg/L	D	09/28/15 13:59	09/29/15 02:16	5

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 GWM B0045452.0018.00420

TestAmerica Job ID: 580-53488-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 580-202326/4**

**Matrix: Water**

**Analysis Batch: 202326**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		2.0		ug/L			10/02/15 12:44	1
Ethylbenzene	ND		3.0		ug/L			10/02/15 12:44	1
Methyl tert-butyl ether	ND		1.0		ug/L			10/02/15 12:44	1
m-Xylene & p-Xylene	ND		3.0		ug/L			10/02/15 12:44	1
o-Xylene	ND		2.0		ug/L			10/02/15 12:44	1
Toluene	ND		2.0		ug/L			10/02/15 12:44	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	106		75 - 120		10/02/15 12:44	1
Dibromofluoromethane (Surr)	104		85 - 115		10/02/15 12:44	1
1,2-Dichloroethane-d4 (Surr)	106		70 - 120		10/02/15 12:44	1
Toluene-d8 (Surr)	98		85 - 120		10/02/15 12:44	1
Trifluorotoluene (Surr)	104		70 - 136		10/02/15 12:44	1

**Lab Sample ID: LCS 580-202326/5**

**Matrix: Water**

**Analysis Batch: 202326**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.	Limits
	Added	Result	Qualifier					
Benzene	20.1	18.0		ug/L		90	80 - 120	
Ethylbenzene	20.1	18.7		ug/L		93	75 - 125	
Methyl tert-butyl ether	20.0	18.8		ug/L		94	65 - 125	
m-Xylene & p-Xylene	20.0	18.8		ug/L		94	75 - 130	
o-Xylene	20.0	18.7		ug/L		94	80 - 120	
Toluene	20.0	18.0		ug/L		90	75 - 120	

Surrogate	LCSD	LCSD	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	108		75 - 120			
Dibromofluoromethane (Surr)	103		85 - 115			
1,2-Dichloroethane-d4 (Surr)	101		70 - 120			
Toluene-d8 (Surr)	97		85 - 120			
Trifluorotoluene (Surr)	105		70 - 136			

**Lab Sample ID: LCSD 580-202326/6**

**Matrix: Water**

**Analysis Batch: 202326**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec	%Rec.	RPD	RPD Limit
	Added	Result	Qualifier						
Benzene	20.1	17.0		ug/L		85	80 - 120	6	30
Ethylbenzene	20.1	17.3		ug/L		86	75 - 125	8	30
Methyl tert-butyl ether	20.0	19.7		ug/L		98	65 - 125	5	30
m-Xylene & p-Xylene	20.0	17.5		ug/L		87	75 - 130	7	30
o-Xylene	20.0	17.2		ug/L		86	80 - 120	8	30
Toluene	20.0	16.5		ug/L		82	75 - 120	9	30

Surrogate	LCSD	LCSD	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	104		75 - 120			

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 GWM B0045452.0018.00420

TestAmerica Job ID: 580-53488-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID:** LCSD 580-202326/6

**Matrix:** Water

**Analysis Batch:** 202326

**Client Sample ID:** Lab Control Sample Dup

**Prep Type:** Total/NA

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Dibromofluoromethane (Surr)	105		85 - 115
1,2-Dichloroethane-d4 (Surr)	103		70 - 120
Toluene-d8 (Surr)	95		85 - 120
Trifluorotoluene (Surr)	104		70 - 136

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

**Lab Sample ID:** MB 580-201840/1-A

**Matrix:** Water

**Analysis Batch:** 202697

**Client Sample ID:** Method Blank

**Prep Type:** Total/NA

**Prep Batch:** 201840

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	MB Result	MB Qualifier	RL	MDL	Unit		Prepared	Analyzed	
Naphthalene	ND		0.010		ug/L	09/26/15 14:44	10/07/15 18:37		1
2-Methylnaphthalene	ND		0.013		ug/L	09/26/15 14:44	10/07/15 18:37		1
1-Methylnaphthalene	ND		0.010		ug/L	09/26/15 14:44	10/07/15 18:37		1
Acenaphthylene	ND		0.010		ug/L	09/26/15 14:44	10/07/15 18:37		1
Acenaphthene	ND		0.010		ug/L	09/26/15 14:44	10/07/15 18:37		1
Fluorene	ND		0.010		ug/L	09/26/15 14:44	10/07/15 18:37		1
Phenanthrene	ND		0.10		ug/L	09/26/15 14:44	10/07/15 18:37		1
Anthracene	ND		0.025		ug/L	09/26/15 14:44	10/07/15 18:37		1
Fluoranthene	ND		0.050		ug/L	09/26/15 14:44	10/07/15 18:37		1
Pyrene	ND		0.050		ug/L	09/26/15 14:44	10/07/15 18:37		1
Benzo[a]anthracene	ND		0.010		ug/L	09/26/15 14:44	10/07/15 18:37		1
Chrysene	ND		0.010		ug/L	09/26/15 14:44	10/07/15 18:37		1
Benzo[a]pyrene	ND		0.010		ug/L	09/26/15 14:44	10/07/15 18:37		1
Indeno[1,2,3-cd]pyrene	ND		0.010		ug/L	09/26/15 14:44	10/07/15 18:37		1
Dibenz(a,h)anthracene	ND		0.010		ug/L	09/26/15 14:44	10/07/15 18:37		1
Benzo[g,h,i]perylene	ND		0.010		ug/L	09/26/15 14:44	10/07/15 18:37		1
Benzo[b]fluoranthene	ND		0.010		ug/L	09/26/15 14:44	10/07/15 18:37		1
Benzo[k]fluoranthene	ND		0.010		ug/L	09/26/15 14:44	10/07/15 18:37		1
Surrogate	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Terphenyl-d14	90			64 - 150			09/26/15 14:44	10/07/15 18:37	1

**Lab Sample ID:** LCS 580-201840/2-A

**Matrix:** Water

**Analysis Batch:** 202697

**Client Sample ID:** Lab Control Sample

**Prep Type:** Total/NA

**Prep Batch:** 201840

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
	Added	Result	Qualifier	Unit		%Rec	Limits
Naphthalene	1.00	0.655		ug/L	66	54 - 106	
2-Methylnaphthalene	1.00	0.748		ug/L	75	54 - 114	
1-Methylnaphthalene	1.00	0.732		ug/L	73	57 - 115	
Acenaphthylene	1.00	0.651		ug/L	65	30 - 127	
Acenaphthene	1.00	0.658		ug/L	66	54 - 109	
Fluorene	1.00	0.769		ug/L	77	50 - 130	
Phenanthrene	1.00	0.728		ug/L	73	53 - 115	
Anthracene	1.00	0.437		ug/L	44	30 - 130	

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 GWM B0045452.0018.00420

TestAmerica Job ID: 580-53488-1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

**Lab Sample ID: LCS 580-201840/2-A**

**Matrix: Water**

**Analysis Batch: 202697**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 201840**

**%Rec.**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Fluoranthene	1.00	0.722		ug/L	72	58 - 128	
Pyrene	1.00	0.685		ug/L	68	53 - 121	
Benzo[a]anthracene	1.00	0.607		ug/L	61	35 - 125	
Chrysene	1.00	0.710		ug/L	71	57 - 120	
Benzo[a]pyrene	1.00	0.441		ug/L	44	30 - 127	
Indeno[1,2,3-cd]pyrene	1.00	0.757		ug/L	76	53 - 131	
Dibenz(a,h)anthracene	1.00	0.762		ug/L	76	60 - 136	
Benzo[g,h,i]perylene	1.00	0.650		ug/L	65	51 - 128	
Benzo[b]fluoranthene	1.00	0.870		ug/L	87	59 - 126	
Benzo[k]fluoranthene	1.00	0.784		ug/L	78	49 - 136	

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Terphenyl-d14	85		64 - 150

**Lab Sample ID: LCSD 580-201840/3-A**

**Matrix: Water**

**Analysis Batch: 202697**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 201840**

**%Rec.**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Naphthalene	1.00	0.615		ug/L	61	54 - 106		6	20
2-Methylnaphthalene	1.00	0.693		ug/L	69	54 - 114		8	20
1-Methylnaphthalene	1.00	0.676		ug/L	68	57 - 115		8	20
Acenaphthylene	1.00	0.598		ug/L	60	30 - 127		9	20
Acenaphthene	1.00	0.613		ug/L	61	54 - 109		7	20
Fluorene	1.00	0.682		ug/L	68	50 - 130		12	20
Phenanthrene	1.00	0.694		ug/L	69	53 - 115		5	20
Anthracene	1.00	0.357		ug/L	36	30 - 130		20	20
Fluoranthene	1.00	0.696		ug/L	70	58 - 128		4	20
Pyrene	1.00	0.661		ug/L	66	53 - 121		3	20
Benzo[a]anthracene	1.00	0.547		ug/L	55	35 - 125		10	20
Chrysene	1.00	0.662		ug/L	66	57 - 120		7	20
Benzo[a]pyrene	1.00	0.406		ug/L	41	30 - 127		8	20
Indeno[1,2,3-cd]pyrene	1.00	0.839		ug/L	84	53 - 131		10	20
Dibenz(a,h)anthracene	1.00	0.849		ug/L	85	60 - 136		11	20
Benzo[g,h,i]perylene	1.00	0.727		ug/L	73	51 - 128		11	20
Benzo[b]fluoranthene	1.00	0.963		ug/L	96	59 - 126		10	20
Benzo[k]fluoranthene	1.00	0.862		ug/L	86	49 - 136		9	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Terphenyl-d14	82		64 - 150

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 GWM B0045452.0018.00420

TestAmerica Job ID: 580-53488-1

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

**Lab Sample ID: MB 580-201867/5**

**Matrix: Water**

**Analysis Batch: 201867**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050		mg/L			09/28/15 13:58	1
<hr/>									
<b>Surrogate</b>									
4-Bromofluorobenzene (Surr)	%Recovery 94	MB Qualifier	Limits 50 - 150				Prepared	Analyzed 09/28/15 13:58	1
Trifluorotoluene (Surr)	103		50 - 150					09/28/15 13:58	1

**Lab Sample ID: LCS 580-201867/6**

**Matrix: Water**

**Analysis Batch: 201867**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	%Rec. Limits
Gasoline	1.16	1.05		mg/L		91	79 - 110
<hr/>							
<b>Surrogate</b>							
4-Bromofluorobenzene (Surr)	%Recovery 98	LCS Qualifier	Limits 50 - 150				
Trifluorotoluene (Surr)	107		50 - 150				

**Lab Sample ID: LCSD 580-201867/7**

**Matrix: Water**

**Analysis Batch: 201867**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec.	RPD	RPD Limit	
Gasoline	1.16	1.08		mg/L		93	79 - 110	2	20
<hr/>									
<b>Surrogate</b>									
4-Bromofluorobenzene (Surr)	%Recovery 101	LCSD Qualifier	Limits 50 - 150						
Trifluorotoluene (Surr)	110		50 - 150						

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

**Lab Sample ID: MB 580-202110/1-A**

**Matrix: Water**

**Analysis Batch: 202971**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 202110**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.11		mg/L		09/30/15 11:07	10/10/15 09:49	1
Motor Oil (>C24-C36)	ND		0.25		mg/L		09/30/15 11:07	10/10/15 09:49	1
<hr/>									
<b>Surrogate</b>									
o-Terphenyl	%Recovery 64	MB Qualifier	Limits 50 - 150				Prepared 09/30/15 11:07	Analyzed 10/10/15 09:49	1

**Lab Sample ID: LCS 580-202110/2-A**

**Matrix: Water**

**Analysis Batch: 202971**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 202110**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	%Rec. Limits
#2 Diesel (C10-C24)	0.500	0.451		mg/L		90	59 - 120

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 GWM B0045452.0018.00420

TestAmerica Job ID: 580-53488-1

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

**Lab Sample ID: LCS 580-202110/2-A**

**Matrix: Water**

**Analysis Batch: 202971**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 202110**

**%Rec.**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	Limits
Motor Oil (>C24-C36)	0.502	0.504		mg/L	100	71 - 140	
<b>Surrogate</b>							
<i>o-Terphenyl</i>	88						

**Lab Sample ID: LCSD 580-202110/3-A**

**Matrix: Water**

**Analysis Batch: 202971**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 202110**

**%Rec.**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec.	RPD	Limit
#2 Diesel (C10-C24)	0.500	0.509		mg/L	102	59 - 120	12	27
Motor Oil (>C24-C36)	0.502	0.573		mg/L	114	71 - 140	13	27
<b>Surrogate</b>								
<i>o-Terphenyl</i>	100							

## Method: 1631E - Mercury, Low Level (CVAFS)

**Lab Sample ID: MB 240-199346/1-A**

**Matrix: Water**

**Analysis Batch: 199801**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 199346**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.50		ng/L		09/28/15 10:30	09/30/15 13:35	1

**Lab Sample ID: LCS 240-199346/2-A**

**Matrix: Water**

**Analysis Batch: 199801**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 199346**

**%Rec.**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	Limits
Mercury	5.00	3.87		ng/L	77	77 - 123	

**Lab Sample ID: 580-53488-2 MS**

**Matrix: Water**

**Analysis Batch: 199606**

**Client Sample ID: EB-RI-CHEV-1**

**Prep Type: Total/NA**

**Prep Batch: 199346**

**%Rec.**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec.	Limits
Mercury	ND		5.00	4.27		ng/L	77	71 - 125	

**Lab Sample ID: 580-53488-2 MSD**

**Matrix: Water**

**Analysis Batch: 199606**

**Client Sample ID: EB-RI-CHEV-1**

**Prep Type: Total/NA**

**Prep Batch: 199346**

**RPD**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	Limits	RPD	Limit
Mercury	ND		5.00	4.10		ng/L	73	71 - 125		4	24

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 GWM B0045452.0018.00420

TestAmerica Job ID: 580-53488-1

## Method: 6020 - Metals (ICP/MS)

**Lab Sample ID: MB 580-201922/19-A**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 201922**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0050	mg/L		09/28/15 13:59	09/29/15 00:53		5
Barium	ND		0.0060	mg/L		09/28/15 13:59	09/29/15 00:53		5
Cadmium	ND		0.0020	mg/L		09/28/15 13:59	09/29/15 00:53		5
Chromium	ND		0.0020	mg/L		09/28/15 13:59	09/29/15 00:53		5
Copper	ND		0.010	mg/L		09/28/15 13:59	09/29/15 00:53		5
Lead	ND		0.0020	mg/L		09/28/15 13:59	09/29/15 00:53		5
Manganese	ND		0.010	mg/L		09/28/15 13:59	09/29/15 00:53		5
Selenium	ND		0.0050	mg/L		09/28/15 13:59	09/29/15 00:53		5
Silver	ND		0.0020	mg/L		09/28/15 13:59	09/29/15 00:53		5
Zinc	ND		0.035	mg/L		09/28/15 13:59	09/29/15 00:53		5

**Lab Sample ID: LCS 580-201922/20-A**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 201922**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.
Arsenic	4.00	4.09	mg/L		102	80 - 120	
Barium	4.00	4.21	mg/L		105	80 - 120	
Cadmium	0.100	0.105	mg/L		105	80 - 120	
Chromium	0.400	0.390	mg/L		98	80 - 120	
Copper	0.500	0.504	mg/L		101	80 - 120	
Lead	1.00	0.938	mg/L		94	80 - 120	
Manganese	1.00	1.01	mg/L		101	80 - 120	
Selenium	4.00	4.24	mg/L		106	80 - 120	
Silver	0.600	0.581	mg/L		97	80 - 120	
Zinc	4.00	3.96	mg/L		99	80 - 120	

**Lab Sample ID: LCSD 580-201922/21-A**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 201922**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.	RPD	Limit
Arsenic	4.00	4.03	mg/L		101	80 - 120		1	20
Barium	4.00	4.14	mg/L		104	80 - 120		2	20
Cadmium	0.100	0.103	mg/L		103	80 - 120		2	20
Chromium	0.400	0.397	mg/L		99	80 - 120		2	20
Copper	0.500	0.502	mg/L		100	80 - 120		1	20
Lead	1.00	0.926	mg/L		93	80 - 120		1	20
Manganese	1.00	1.00	mg/L		100	80 - 120		0	20
Selenium	4.00	4.11	mg/L		103	80 - 120		3	20
Silver	0.600	0.579	mg/L		96	80 - 120		0	20
Zinc	4.00	4.02	mg/L		101	80 - 120		1	20

**Lab Sample ID: 580-53396-D-2-C MS**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Matrix Spike**

**Prep Type: Total/NA**

**Prep Batch: 201922**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec.
Arsenic	0.0093		4.00	4.36	mg/L		109	80 - 120	

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 GWM B0045452.0018.00420

TestAmerica Job ID: 580-53488-1

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: 580-53396-D-2-C MS**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Matrix Spike**

**Prep Type: Total/NA**

**Prep Batch: 201922**

**%Rec.**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits		
Barium	0.056		4.00	4.47		mg/L	110	80 - 120			
Cadmium	ND		0.100	0.111		mg/L	111	80 - 120			
Chromium	ND		0.400	0.434		mg/L	108	80 - 120			
Copper	ND		0.500	0.540		mg/L	108	80 - 120			
Lead	ND		1.00	1.01		mg/L	101	80 - 120			
Manganese	3.6		1.00	4.73		mg/L	111	80 - 120			
Selenium	ND		4.00	4.54		mg/L	114	80 - 120			
Silver	ND		0.600	0.612		mg/L	102	80 - 120			
Zinc	ND		4.00	4.31		mg/L	107	80 - 120			

**Lab Sample ID: 580-53396-D-2-D MSD**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total/NA**

**Prep Batch: 201922**

**%Rec.**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	0.0093		4.00	4.28		mg/L	107	80 - 120	2	20	
Barium	0.056		4.00	4.40		mg/L	109	80 - 120	2	20	
Cadmium	ND		0.100	0.108		mg/L	108	80 - 120	3	20	
Chromium	ND		0.400	0.426		mg/L	106	80 - 120	2	20	
Copper	ND		0.500	0.529		mg/L	106	80 - 120	2	20	
Lead	ND		1.00	0.996		mg/L	100	80 - 120	1	20	
Manganese	3.6		1.00	4.71		mg/L	110	80 - 120	0	20	
Selenium	ND		4.00	4.45		mg/L	111	80 - 120	2	20	
Silver	ND		0.600	0.605		mg/L	101	80 - 120	1	20	
Zinc	ND		4.00	4.23		mg/L	105	80 - 120	2	20	

**Lab Sample ID: 580-53396-D-2-B DU**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Duplicate**

**Prep Type: Total/NA**

**Prep Batch: 201922**

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	Limit
Arsenic	0.0093			0.00931		mg/L			0.2	20	
Barium	0.056			0.0568		mg/L			1	20	
Cadmium	ND			ND		mg/L			NC	20	
Chromium	ND			ND		mg/L			NC	20	
Copper	ND			ND		mg/L			NC	20	
Lead	ND			ND		mg/L			NC	20	
Manganese	3.6			3.65		mg/L			1	20	
Selenium	ND			ND		mg/L			NC	20	
Silver	ND			ND		mg/L			NC	20	
Zinc	ND			ND		mg/L			NC	20	

TestAmerica Seattle

# Lab Chronicle

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 GWM B0045452.0018.00420

TestAmerica Job ID: 580-53488-1

**Client Sample ID: Trip Blank**

**Date Collected: 09/21/15 00:00**

**Date Received: 09/21/15 15:00**

**Lab Sample ID: 580-53488-1**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	NWTPH-Gx		1	201867	09/28/15 15:37	D1R	TAL SEA

**Client Sample ID: EB-RI-CHEV-1**

**Date Collected: 09/21/15 11:55**

**Date Received: 09/21/15 15:00**

**Lab Sample ID: 580-53488-2**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	202326	10/02/15 16:32	TL1	TAL SEA
Total/NA	Prep	3520C			201840	09/26/15 14:45	JDR	TAL SEA
Total/NA	Analysis	8270C SIM		1	202697	10/07/15 21:42	ERZ	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	201867	09/28/15 20:35	D1R	TAL SEA
Total/NA	Prep	3510C			202110	09/30/15 11:07	DCC	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	202971	10/10/15 10:47	NMI	TAL SEA
Total/NA	Prep	1631E			199346	09/28/15 10:30	DNS	TAL CAN
Total/NA	Analysis	1631E		1	199606	09/29/15 16:43	DNS	TAL CAN
Total/NA	Prep	3010A			201922	09/28/15 13:59	PAB	TAL SEA
Total/NA	Analysis	6020		5	201970	09/29/15 02:16	FCW	TAL SEA

**Laboratory References:**

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

TestAmerica Seattle

## Certification Summary

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 GWM B0045452.0018.00420

TestAmerica Job ID: 580-53488-1

### Laboratory: TestAmerica Seattle

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-022	03-02-16
California	State Program	9	2901	01-31-17
L-A-B	DoD ELAP		L2236	01-19-16
L-A-B	ISO/IEC 17025		L2236	01-19-16
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-06-16
US Fish & Wildlife	Federal		LE058448-0	02-28-16
USDA	Federal		P330-14-00126	04-08-17
Washington	State Program	10	C553	02-17-16

### Laboratory: TestAmerica Canton

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	NELAP	9	01144CA	06-30-14 *
California	State Program	9	2927	04-30-17
Connecticut	State Program	1	PH-0590	12-31-15
Illinois	NELAP	5	200004	07-31-16
Kansas	NELAP	7	E-10336	01-31-16 *
Kentucky (UST)	State Program	4	58	02-26-16
Kentucky (WW)	State Program	4	98016	12-31-15
L-A-B	DoD ELAP		L2315	07-18-16
Minnesota	NELAP	5	039-999-348	12-31-15
Nevada	State Program	9	OH-000482008A	07-31-16
New Jersey	NELAP	2	OH001	10-30-15 *
New York	NELAP	2	10975	03-31-16
Ohio VAP	State Program	5	CL0024	10-31-15 *
Oregon	NELAP	10	4062	02-23-16
Pennsylvania	NELAP	3	68-00340	08-31-16
Texas	NELAP	6	T104704517-15-5	08-31-16
USDA	Federal		P330-13-00319	11-26-16
Virginia	NELAP	3	460175	09-14-16
Washington	State Program	10	C971	01-12-16
West Virginia DEP	State Program	3	210	12-31-15
Wisconsin	State Program	5	999518190	08-31-16

\* Certification renewal pending - certification considered valid.

## Sample Summary

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 GWM B0045452.0018.00420

TestAmerica Job ID: 580-53488-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-53488-1	Trip Blank	Water	09/21/15 00:00	09/21/15 15:00
580-53488-2	EB-RI-CHEV-1	Water	09/21/15 11:55	09/21/15 15:00

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TestAmerica Seattle



***Chain of  
Custody Record***

Client APGADIS			Client Contact Lynne Fenley			Date 9/21/15			Chain of Custody Number 30571						
Address 111 SW Columbia Street, Suite 670			Telephone Number (Area Code)/Fax Number 503-220-8201 x1114			Lab Number			Page 1 of 1						
City Portland	State OR	Zip Code 97201	Sampler MA/HAC	Lab Contact Sarah Murphy	Analysis (Attach list if more space is needed)										
Project Name and Location (State) 3Q15 Willbridge GWM			Billing Contact												
Contract/Purchase Order/Quote No. B0045452.0018.00420			Matrix			Containers & Preservatives			Special Instructions/ Conditions of Receipt						
Sample I.D. and Location/Description (Containers for each sample may be combined on one line)			Date	Time	Air	Aqueous	Sed.	Soil	Unpres.	H2SO4	HN03	HCl	NaOH	ZnCl/ NaOH	BTEX, MTBE NMTIH, Gx NMTIH, Dx PAH (low level) Total metals mercury (low level)
Trip blank			1	1		✓									X X X X X X
EB-RI-CHEV-1			9/21/15	1155		✓		4	17						

*Special Instructions/  
Conditions of Receipt*

Page 18 of 21

Cooler		ICE	Possible Hazard Identification				<input checked="" type="checkbox"/> Non-Hazard	<input type="checkbox"/> Flammable	<input type="checkbox"/> Skin Irritant	<input type="checkbox"/> Poison B	<input type="checkbox"/> Unknown	<input type="checkbox"/> Sample Disposal	<input checked="" type="checkbox"/> Disposal By Lab	(A fee may be assessed if samples are retained longer than 1 month)
<input checked="" type="checkbox"/> Yes		<input type="checkbox"/> No	Cooler Temp:								<input type="checkbox"/> Return To Client		<input type="checkbox"/> Archive For _____ Months	
Turn Around Time Required (business days)														
<input type="checkbox"/> 24 Hours		<input type="checkbox"/> 48 Hours		<input type="checkbox"/> 5 Days		<input type="checkbox"/> 10 Days		<input type="checkbox"/> 15 Days		<input checked="" type="checkbox"/> Other		2 Weeks		
QC Requirements (Specify)														
IR1 0.1/0.5 A2 1.3/1.4														
1. Relinquished By		Sign/Print		Date	Time		1. Received By		Sign/Print		Date	Time		
Holly Olson				9/21/15	1430		Jessica Morgan				9/21/15	1430		
2. Relinquished By		Sign/Print		Date	Time		2. Received By		Sign/Print		Date	Time		
Jessica Morgan				9/21/15	1500						9/21/15	1500		
3. Relinquished By		Sign/Print		Date	Time		3. Received By		Sign/Print		Date	Time		
Tom Blank				9/21/15	1700		Tom Blank				9/22/15	1000		
Comments: ** including RCRA 8, 7n, C ** including 2-methylnaphthalene														
Send report to Brian.Marcum@arcadis.com and Brian.Flemister@arcadis.com														
DISTRIBUTION: WHITE - Stays with the Samples; CANARY - Returned to Client with Report; PINK - Field Copy														

Comments: \*\* including RCRA 8, Zn, Cu \*\* including 2-methylnaphthalene

send report to Brian.marumia@arcadis.com and Brian.Flemister@arcadis.com

**DISTRIBUTION:** WHITE – Stays with the Samples; CANARY – Returned to Client with Report; PINK – Field Copy

TAL-8274-580 (0210)

1941C17.9

## Chain of Custody Record



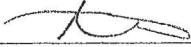
TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

<b>Client Information (Sub Contract Lab)</b>		Sampler:	Lab PM:	Murphy, Sarah A	Carrier Tracking No(s):	COC No:	580-30425.1			
Client Contact: Shipping/Receiving		Phone:	E-Mail:	sarah.murphy@testamericainc.com			Page:			
Company: TestAmerica Laboratories, Inc.					Page 1 of 1			Job #:		
Address: 4101 Shuffel Street NW,		Due Date Requested: 10/1/2015			Analysis Requested			Preservation Codes:		
City: North Canton		TAT Requested (days):						A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:		
State, Zip: OH, 44720								M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - ph 4-5 Z - other (specify)		
Phone: 330-497-9396(Tel) 330-497-0772(Fax)		PO #:								
Email:		WO #:								
Project Name: 3Q2015 GWM B0045452.0018.00420		Project #: 58008238								
Site:		SSOW#:								
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Preservation Code:	Date Received	Total Number of Samples	Special Instructions/Note:	
EB-RI-CHEV-1 (580-53488-2)		9/21/15	11:55 Pacific		Water	X		2	2L4B	
Possible Hazard Identification		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)								
Unconfirmed		<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months								
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:								
Empty Kit Relinquished by:		Date:	Time:	Method of Shipment:						
Relinquished by:		Date/Time: 9/22/15 1500	Company: TA	Received by:	Date/Time: 9/23/15 9:10	Company: TA				
Relinquished by:		Date/Time:	Company:	Received by:	Date/Time:	Company:				
Relinquished by:		Date/Time:	Company:	Received by:	Date/Time:	Company:				
Custody Seals Intact: △ Yes △ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:						

TestAmerica Canton Sample Receipt Form/Narrative  
Canton Facility

Login # : \_\_\_\_\_

Client <u>Seattle</u>	Site Name _____	Cooler unpacked by: 
Cooler Received on <u>9-23-15</u>	Opened on <u>9-24-15</u>	
FedEx: 1 <sup>st</sup> Grd <input checked="" type="checkbox"/> UPS FAS Stetson Client Drop Off TestAmerica Courier	Other	
Receipt After-hours: Drop-off Date/Time _____		Storage Location _____
TestAmerica Cooler # _____	Foam Box	Client Cooler <input checked="" type="checkbox"/> Other _____
Packing material used: <u>Bubble Wrap</u> <u>Foam</u> <u>Plastic Bag</u>	None	Other _____
COOLANT: <u>Wet Ice</u> <u>Blue Ice</u> <u>Dry Ice</u> <u>Water</u> <u>None</u>		

1. Cooler temperature upon receipt  
 IR GUN# A (CF +1.0 °C) Observed Cooler Temp. \_\_\_\_ °C Corrected Cooler Temp. \_\_\_\_ °C  
 IR GUN# 4 (CF +0.5 °C) Observed Cooler Temp. \_\_\_\_ °C Corrected Cooler Temp. \_\_\_\_ °C  
 IR GUN# 5 (CF +0.4 °C) Observed Cooler Temp. \_\_\_\_ °C Corrected Cooler Temp. \_\_\_\_ °C  
 IR GUN# 8 (CF -1.5 °C) Observed Cooler Temp. 13.4 °C Corrected Cooler Temp. 17.9 °C
  See Multiple Cooler Form
2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No  
 -Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA  
 -Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels be reconciled with the COC? Yes No
9. Were correct bottle(s) used for the test(s) indicated? Yes No
10. Sufficient quantity received to perform indicated analyses? Yes No
11. Were sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC554612
12. Were VOAs on the COC? Yes
13. Were air bubbles >6 mm in any VOA vials? Yes No NA
14. Was a trip blank present in the cooler(s)? Trip Blank Lot # \_\_\_\_\_ Yes

Contacted PM \_\_\_\_\_ Date \_\_\_\_\_ by \_\_\_\_\_ via Verbal Voice Mail Other  
Concerning \_\_\_\_\_

**14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES**

Samples processed by:

**15. SAMPLE CONDITION**

Sample(s) \_\_\_\_\_ were received after the recommended holding time had expired.  
 Sample(s) \_\_\_\_\_ were received in a broken container.  
 Sample(s) \_\_\_\_\_ were received with bubble >6 mm in diameter. (Notify PM)

**16. SAMPLE PRESERVATION**

Sample(s) \_\_\_\_\_ were further preserved in the laboratory.  
 Time preserved: \_\_\_\_\_ Preservative(s) added/Lot number(s): \_\_\_\_\_

## Login Sample Receipt Checklist

Client: ARCADIS U.S. Inc

Job Number: 580-53488-1

**Login Number: 53488**

**List Source: TestAmerica Seattle**

**List Number: 1**

**Creator: Svabik-Seror, Philip M**

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Seattle

5755 8th Street East

Tacoma, WA 98424

Tel: (253)922-2310

TestAmerica Job ID: 580-53157-1

Client Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

For:

ARCADIS U.S. Inc

111 SW Columbia Street

Suite 670

Portland, Oregon 97201

Attn: Brian Marcum

*Sarah Murphy*

Authorized for release by:

10/12/2015 4:57:42 PM

Sarah Murphy, Project Manager I

(253)922-2310

[sarah.murphy@testamericainc.com](mailto:sarah.murphy@testamericainc.com)

### LINKS

Review your project  
results through

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The  
Expert

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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# Case Narrative

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53157-1

## Job ID: 580-53157-1

### Laboratory: TestAmerica Seattle

#### Narrative

#### Job Narrative 580-53157-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 9/9/2015 11:10 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 0.5° C, 0.6° C, 1.0° C and 1.2° C.

#### GC/MS VOA

Method(s) 8260B: The following sample was diluted to bring the concentration of target analytes within the calibration range: CR-28A-SC-CHEV (580-53157-2). Elevated reporting limits (RLs) are provided.

Method(s) 8260B: Reanalysis of the following sample was performed outside of the analytical holding time due to results exceeding the calibration range. CR-28A-SC-CHEV (580-53157-2).

Method(s) NWTPH-Gx: Surrogate recovery for the following sample was outside control limits: CR-28A-SC-CHEV (580-53157-2). Evidence of matrix interference due to high target analytes is present; therefore, re-extraction and/or re-analysis was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### GC/MS Semi VOA

Method(s) 8270C SIM: The following analyte(s) recovered outside control limits for the LCS/LCSD associated with preparation batch 580-200834 and 580-200834 and analytical batch 580-201557: Anthracene, Acenaphthylene and Benzo[a]pyrene. These analytes were outside the Marginal Exceedance Limits and/or were indicative of a systematic problem; therefore, re-extraction and/or re-analysis was performed. Re-analysis yielded little or no improvement in QC results (AB 202733) and insufficient sample volume remained to perform a re-extraction or re-analysis; therefore, original set of data have been qualified and reported.

Method(s) 8270C SIM: The following sample was diluted prior to analysis due to the nature of the sample matrix: CR-28A-SC-CHEV (580-53157-2). Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### GC Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Definitions/Glossary

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53157-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time

### GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.

### GC VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits

### Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

## Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53157-1

## Client Sample ID: TRIP BLANKS

Date Collected: 09/08/15 00:00

Date Received: 09/09/15 11:10

## Lab Sample ID: 580-53157-1

Matrix: Water

### Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			09/18/15 14:54	1
Ethylbenzene	ND		3.0		ug/L			09/18/15 14:54	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/18/15 14:54	1
m-Xylene & p-Xylene	ND		3.0		ug/L			09/18/15 14:54	1
o-Xylene	ND		2.0		ug/L			09/18/15 14:54	1
Toluene	ND		2.0		ug/L			09/18/15 14:54	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	104			75 - 120				09/18/15 14:54	1
Dibromofluoromethane (Surr)	110			85 - 115				09/18/15 14:54	1
1,2-Dichloroethane-d4 (Surr)	118			70 - 120				09/18/15 14:54	1
Toluene-d8 (Surr)	108			85 - 120				09/18/15 14:54	1
Trifluorotoluene (Surr)	96			70 - 136				09/18/15 14:54	1

### Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050		mg/L			09/17/15 18:55	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	90			50 - 150				09/17/15 18:55	1
Trifluorotoluene (Surr)	111			50 - 150				09/17/15 18:55	1

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53157-1

**Client Sample ID: CR-28A-SC-CHEV**

**Lab Sample ID: 580-53157-2**

**Matrix: Water**

Date Collected: 09/08/15 15:00

Date Received: 09/09/15 11:10

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			09/18/15 17:12	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/18/15 17:12	1
<b>m-Xylene &amp; p-Xylene</b>	<b>51</b>		3.0		ug/L			09/18/15 17:12	1
<b>o-Xylene</b>	<b>3.0</b>		2.0		ug/L			09/18/15 17:12	1
Toluene	3.8		2.0		ug/L			09/18/15 17:12	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	112		75 - 120					09/18/15 17:12	1
Dibromofluoromethane (Surr)	107		85 - 115					09/18/15 17:12	1
1,2-Dichloroethane-d4 (Surr)	118		70 - 120					09/18/15 17:12	1
Toluene-d8 (Surr)	110		85 - 120					09/18/15 17:12	1
Trifluorotoluene (Surr)	98		70 - 136					09/18/15 17:12	1

## Method: 8260B - Volatile Organic Compounds (GC/MS) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	370	H	30		ug/L			09/28/15 18:26	10
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	105		75 - 120					09/28/15 18:26	10
Dibromofluoromethane (Surr)	108		85 - 115					09/28/15 18:26	10
1,2-Dichloroethane-d4 (Surr)	111		70 - 120					09/28/15 18:26	10
Toluene-d8 (Surr)	110		85 - 120					09/28/15 18:26	10
Trifluorotoluene (Surr)	106		70 - 136					09/28/15 18:26	10

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	ND	*	0.11		ug/L		09/15/15 16:36	09/24/15 02:12	10
<b>Acenaphthene</b>	<b>0.44</b>		0.11		ug/L		09/15/15 16:36	09/24/15 02:12	10
<b>Fluorene</b>	<b>0.52</b>		0.11		ug/L		09/15/15 16:36	09/24/15 02:12	10
Phenanthrene	ND		1.1		ug/L		09/15/15 16:36	09/24/15 02:12	10
Anthracene	ND	*	0.27		ug/L		09/15/15 16:36	09/24/15 02:12	10
Fluoranthene	ND		0.54		ug/L		09/15/15 16:36	09/24/15 02:12	10
Pyrene	ND		0.54		ug/L		09/15/15 16:36	09/24/15 02:12	10
Benzo[a]anthracene	ND		0.11		ug/L		09/15/15 16:36	09/24/15 02:12	10
Chrysene	ND		0.11		ug/L		09/15/15 16:36	09/24/15 02:12	10
Benzo[a]pyrene	ND	*	0.11		ug/L		09/15/15 16:36	09/24/15 02:12	10
Indeno[1,2,3-cd]pyrene	ND		0.11		ug/L		09/15/15 16:36	09/24/15 02:12	10
Dibenz(a,h)anthracene	ND		0.11		ug/L		09/15/15 16:36	09/24/15 02:12	10
Benzo[g,h,i]perylene	ND		0.11		ug/L		09/15/15 16:36	09/24/15 02:12	10
Benzo[b]fluoranthene	ND		0.11		ug/L		09/15/15 16:36	09/24/15 02:12	10
Benzo[k]fluoranthene	ND		0.11		ug/L		09/15/15 16:36	09/24/15 02:12	10
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Terphenyl-d14	84		64 - 150				09/15/15 16:36	09/24/15 02:12	10

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	250		1.1		ug/L		09/15/15 16:36	10/10/15 20:56	100
2-Methylnaphthalene	68		1.4		ug/L		09/15/15 16:36	10/10/15 20:56	100
1-Methylnaphthalene	76		1.1		ug/L		09/15/15 16:36	10/10/15 20:56	100

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53157-1

**Client Sample ID: CR-28A-SC-CHEV**

Date Collected: 09/08/15 15:00

Date Received: 09/09/15 11:10

**Lab Sample ID: 580-53157-2**

Matrix: Water

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	8.0		0.050		mg/L			09/17/15 22:14	1
Surrogate	%Recovery	Qualifier		Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	635	X		50 - 150				09/17/15 22:14	1
Trifluorotoluene (Surr)	153	X		50 - 150				09/17/15 22:14	1

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	6.6		0.13		mg/L		09/22/15 11:29	09/28/15 23:20	1
Motor Oil (>C24-C36)	0.44		0.29		mg/L		09/22/15 11:29	09/28/15 23:20	1
Surrogate	%Recovery	Qualifier		Limits			Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	107			50 - 150			09/22/15 11:29	09/28/15 23:20	1

## Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.031		0.010		mg/L		09/21/15 17:30	09/23/15 03:18	10
Barium	0.065		0.012		mg/L		09/21/15 17:30	09/23/15 03:18	10
Cadmium	ND		0.0040		mg/L		09/21/15 17:30	09/23/15 03:18	10
Chromium	0.0061		0.0040		mg/L		09/21/15 17:30	09/23/15 03:18	10
Copper	ND		0.020		mg/L		09/21/15 17:30	09/23/15 03:18	10
Lead	0.012		0.0040		mg/L		09/21/15 17:30	09/23/15 03:18	10
Manganese	0.57		0.020		mg/L		09/21/15 17:30	09/23/15 03:18	10
Selenium	ND		0.010		mg/L		09/21/15 17:30	09/23/15 03:18	10
Silver	ND		0.0040		mg/L		09/21/15 17:30	09/23/15 03:18	10
Zinc	0.12		0.070		mg/L		09/21/15 17:30	09/23/15 03:18	10

## Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		09/22/15 09:36	09/22/15 13:58	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	24		5.0		mg/L			09/24/15 00:08	5

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53157-1

**Client Sample ID: CR-28B-SC-CHEV**

**Lab Sample ID: 580-53157-3**

**Matrix: Water**

Date Collected: 09/08/15 15:30

Date Received: 09/09/15 11:10

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			09/18/15 17:40	1
Ethylbenzene	ND		3.0		ug/L			09/18/15 17:40	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/18/15 17:40	1
m-Xylene & p-Xylene	ND		3.0		ug/L			09/18/15 17:40	1
o-Xylene	ND		2.0		ug/L			09/18/15 17:40	1
Toluene	ND		2.0		ug/L			09/18/15 17:40	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	104			75 - 120				09/18/15 17:40	1
Dibromofluoromethane (Surr)	100			85 - 115				09/18/15 17:40	1
1,2-Dichloroethane-d4 (Surr)	106			70 - 120				09/18/15 17:40	1
Toluene-d8 (Surr)	106			85 - 120				09/18/15 17:40	1
Trifluorotoluene (Surr)	98			70 - 136				09/18/15 17:40	1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Naphthalene	<b>0.025</b>		0.011		ug/L		09/15/15 16:36	09/24/15 00:38	1	
2-Methylnaphthalene	ND		0.014		ug/L		09/15/15 16:36	09/24/15 00:38	1	
1-Methylnaphthalene	ND		0.011		ug/L		09/15/15 16:36	09/24/15 00:38	1	
Acenaphthylene	ND *		0.011		ug/L		09/15/15 16:36	09/24/15 00:38	1	
Acenaphthene	ND		0.011		ug/L		09/15/15 16:36	09/24/15 00:38	1	
Fluorene	ND		0.011		ug/L		09/15/15 16:36	09/24/15 00:38	1	
Phenanthrene	ND		0.11		ug/L		09/15/15 16:36	09/24/15 00:38	1	
Anthracene	ND *		0.027		ug/L		09/15/15 16:36	09/24/15 00:38	1	
Fluoranthene	<b>0.066</b>		0.053		ug/L		09/15/15 16:36	09/24/15 00:38	1	
Pyrene	<b>0.069</b>		0.053		ug/L		09/15/15 16:36	09/24/15 00:38	1	
Benzo[a]anthracene	<b>0.027</b>		0.011		ug/L		09/15/15 16:36	09/24/15 00:38	1	
Chrysene	<b>0.041</b>		0.011		ug/L		09/15/15 16:36	09/24/15 00:38	1	
Benzo[a]pyrene	<b>0.033 *</b>		0.011		ug/L		09/15/15 16:36	09/24/15 00:38	1	
Indeno[1,2,3-cd]pyrene	<b>0.025</b>		0.011		ug/L		09/15/15 16:36	09/24/15 00:38	1	
Dibenz(a,h)anthracene	ND		0.011		ug/L		09/15/15 16:36	09/24/15 00:38	1	
Benzo[g,h,i]perylene	<b>0.022</b>		0.011		ug/L		09/15/15 16:36	09/24/15 00:38	1	
Benzo[b]fluoranthene	<b>0.074</b>		0.011		ug/L		09/15/15 16:36	09/24/15 00:38	1	
Benzo[k]fluoranthene	<b>0.023</b>		0.011		ug/L		09/15/15 16:36	09/24/15 00:38	1	
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>	
Terphenyl-d14	89			64 - 150				09/15/15 16:36	09/24/15 00:38	1

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050		mg/L			09/19/15 08:42	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	99		50 - 150					09/19/15 08:42	1
Trifluorotoluene (Surr)	108		50 - 150					09/19/15 08:42	1

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	<b>1.4</b>		0.11		mg/L		09/22/15 11:29	09/28/15 23:38	1
Motor Oil (>C24-C36)	<b>0.96</b>		0.26		mg/L		09/22/15 11:29	09/28/15 23:38	1

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53157-1

**Client Sample ID: CR-28B-SC-CHEV**

**Date Collected: 09/08/15 15:30**

**Date Received: 09/09/15 11:10**

**Lab Sample ID: 580-53157-3**

**Matrix: Water**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o-Terphenyl</i>	128		50 - 150	09/22/15 11:29	09/28/15 23:38	1

## Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.010		mg/L		09/21/15 17:30	09/23/15 03:23	10
Barium	ND		0.012		mg/L		09/21/15 17:30	09/23/15 03:23	10
Cadmium	ND		0.0040		mg/L		09/21/15 17:30	09/23/15 03:23	10
Chromium	0.0043		0.0040		mg/L		09/21/15 17:30	09/23/15 03:23	10
Copper	ND		0.020		mg/L		09/21/15 17:30	09/23/15 03:23	10
Lead	ND		0.0040		mg/L		09/21/15 17:30	09/23/15 03:23	10
Manganese	0.11		0.020		mg/L		09/21/15 17:30	09/23/15 03:23	10
Selenium	ND		0.010		mg/L		09/21/15 17:30	09/23/15 03:23	10
Silver	ND		0.0040		mg/L		09/21/15 17:30	09/23/15 03:23	10
Zinc	0.086		0.070		mg/L		09/21/15 17:30	09/23/15 03:23	10

## Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		09/22/15 09:36	09/22/15 14:07	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	3.4		1.0		mg/L		09/24/15 00:08		1

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53157-1

**Client Sample ID: CR-28C-SC-CHEV**

**Lab Sample ID: 580-53157-4**

**Matrix: Water**

Date Collected: 09/08/15 16:00

Date Received: 09/09/15 11:10

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			09/18/15 18:07	1
Ethylbenzene	ND		3.0		ug/L			09/18/15 18:07	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/18/15 18:07	1
m-Xylene & p-Xylene	ND		3.0		ug/L			09/18/15 18:07	1
o-Xylene	ND		2.0		ug/L			09/18/15 18:07	1
Toluene	ND		2.0		ug/L			09/18/15 18:07	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	101			75 - 120				09/18/15 18:07	1
Dibromofluoromethane (Surr)	98			85 - 115				09/18/15 18:07	1
1,2-Dichloroethane-d4 (Surr)	105			70 - 120				09/18/15 18:07	1
Toluene-d8 (Surr)	102			85 - 120				09/18/15 18:07	1
Trifluorotoluene (Surr)	98			70 - 136				09/18/15 18:07	1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	0.017		0.011		ug/L		09/15/15 16:36	09/24/15 01:09	1
2-Methylnaphthalene	ND		0.014		ug/L		09/15/15 16:36	09/24/15 01:09	1
1-Methylnaphthalene	ND		0.011		ug/L		09/15/15 16:36	09/24/15 01:09	1
Acenaphthylene	ND *		0.011		ug/L		09/15/15 16:36	09/24/15 01:09	1
Acenaphthene	ND		0.011		ug/L		09/15/15 16:36	09/24/15 01:09	1
Fluorene	ND		0.011		ug/L		09/15/15 16:36	09/24/15 01:09	1
Phenanthrene	ND		0.11		ug/L		09/15/15 16:36	09/24/15 01:09	1
Anthracene	ND *		0.027		ug/L		09/15/15 16:36	09/24/15 01:09	1
Fluoranthene	0.14		0.055		ug/L		09/15/15 16:36	09/24/15 01:09	1
Pyrene	0.090		0.055		ug/L		09/15/15 16:36	09/24/15 01:09	1
Benzo[a]anthracene	0.036		0.011		ug/L		09/15/15 16:36	09/24/15 01:09	1
Chrysene	0.077		0.011		ug/L		09/15/15 16:36	09/24/15 01:09	1
Benzo[a]pyrene	0.034 *		0.011		ug/L		09/15/15 16:36	09/24/15 01:09	1
Indeno[1,2,3-cd]pyrene	0.020		0.011		ug/L		09/15/15 16:36	09/24/15 01:09	1
Dibenz(a,h)anthracene	ND		0.011		ug/L		09/15/15 16:36	09/24/15 01:09	1
Benzo[g,h,i]perylene	0.016		0.011		ug/L		09/15/15 16:36	09/24/15 01:09	1
Benzo[b]fluoranthene	0.095		0.011		ug/L		09/15/15 16:36	09/24/15 01:09	1
Benzo[k]fluoranthene	0.031		0.011		ug/L		09/15/15 16:36	09/24/15 01:09	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Terphenyl-d14	89			64 - 150				09/15/15 16:36	09/24/15 01:09

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050		mg/L			09/17/15 23:20	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	92			50 - 150				09/17/15 23:20	1
Trifluorotoluene (Surr)	105			50 - 150				09/17/15 23:20	1

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	1.6		0.11		mg/L		09/22/15 11:29	09/28/15 23:56	1
Motor Oil (>C24-C36)	0.49		0.26		mg/L		09/22/15 11:29	09/28/15 23:56	1

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53157-1

**Client Sample ID: CR-28C-SC-CHEV**

Date Collected: 09/08/15 16:00

Date Received: 09/09/15 11:10

**Lab Sample ID: 580-53157-4**

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o-Terphenyl</i>	113		50 - 150	09/22/15 11:29	09/28/15 23:56	1

## Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.011		0.010		mg/L		09/21/15 17:30	09/23/15 03:27	10
Barium	0.33		0.012		mg/L		09/21/15 17:30	09/23/15 03:27	10
Cadmium	ND		0.0040		mg/L		09/21/15 17:30	09/23/15 03:27	10
Chromium	0.10		0.0040		mg/L		09/21/15 17:30	09/23/15 03:27	10
Copper	0.048		0.020		mg/L		09/21/15 17:30	09/23/15 03:27	10
Lead	0.022		0.0040		mg/L		09/21/15 17:30	09/23/15 03:27	10
Manganese	1.1		0.020		mg/L		09/21/15 17:30	09/23/15 03:27	10
Selenium	ND		0.010		mg/L		09/21/15 17:30	09/23/15 03:27	10
Silver	ND		0.0040		mg/L		09/21/15 17:30	09/23/15 03:27	10
Zinc	0.16		0.070		mg/L		09/21/15 17:30	09/23/15 03:27	10

## Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0050		mg/L		09/21/15 14:54	09/22/15 15:54	5
Barium	0.10		0.0060		mg/L		09/21/15 14:54	09/22/15 15:54	5
Cadmium	ND		0.0020		mg/L		09/21/15 14:54	09/22/15 15:54	5
Chromium	ND		0.0020		mg/L		09/21/15 14:54	09/22/15 15:54	5
Copper	ND		0.010		mg/L		09/21/15 14:54	09/22/15 15:54	5
Lead	ND		0.0020		mg/L		09/21/15 14:54	09/22/15 15:54	5
Manganese	0.23		0.010		mg/L		09/21/15 14:54	09/22/15 15:54	5
Selenium	ND		0.0050		mg/L		09/21/15 14:54	09/22/15 15:54	5
Silver	ND		0.0020		mg/L		09/21/15 14:54	09/22/15 15:54	5
Zinc	ND		0.035		mg/L		09/21/15 14:54	09/22/15 15:54	5

## Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.00022		0.00020		mg/L		09/22/15 09:36	09/22/15 14:14	1

## Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		09/22/15 09:36	09/22/15 14:19	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	2.6		1.0		mg/L		09/24/15 00:08		1

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53157-1

**Client Sample ID: BD-SC-CHEV-2**

Date Collected: 09/08/15 00:00

Date Received: 09/09/15 11:10

**Lab Sample ID: 580-53157-5**

Matrix: Water

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			09/18/15 18:34	1
Ethylbenzene	ND		3.0		ug/L			09/18/15 18:34	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/18/15 18:34	1
m-Xylene & p-Xylene	ND		3.0		ug/L			09/18/15 18:34	1
o-Xylene	ND		2.0		ug/L			09/18/15 18:34	1
Toluene	ND		2.0		ug/L			09/18/15 18:34	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	104			75 - 120				09/18/15 18:34	1
Dibromofluoromethane (Surr)	103			85 - 115				09/18/15 18:34	1
1,2-Dichloroethane-d4 (Surr)	108			70 - 120				09/18/15 18:34	1
Toluene-d8 (Surr)	108			85 - 120				09/18/15 18:34	1
Trifluorotoluene (Surr)	99			70 - 136				09/18/15 18:34	1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Naphthalene</b>	<b>0.013</b>		0.010		ug/L		09/15/15 16:36	09/24/15 01:41	1
2-Methylnaphthalene	ND		0.014		ug/L		09/15/15 16:36	09/24/15 01:41	1
1-Methylnaphthalene	ND		0.010		ug/L		09/15/15 16:36	09/24/15 01:41	1
Acenaphthylene	ND *		0.010		ug/L		09/15/15 16:36	09/24/15 01:41	1
Acenaphthene	ND		0.010		ug/L		09/15/15 16:36	09/24/15 01:41	1
Fluorene	ND		0.010		ug/L		09/15/15 16:36	09/24/15 01:41	1
Phenanthrene	ND		0.10		ug/L		09/15/15 16:36	09/24/15 01:41	1
Anthracene	ND *		0.026		ug/L		09/15/15 16:36	09/24/15 01:41	1
Fluoranthene	ND		0.052		ug/L		09/15/15 16:36	09/24/15 01:41	1
Pyrene	ND		0.052		ug/L		09/15/15 16:36	09/24/15 01:41	1
<b>Benzo[a]anthracene</b>	<b>0.010</b>		0.010		ug/L		09/15/15 16:36	09/24/15 01:41	1
<b>Chrysene</b>	<b>0.025</b>		0.010		ug/L		09/15/15 16:36	09/24/15 01:41	1
<b>Benzo[a]pyrene</b>	<b>0.012 *</b>		0.010		ug/L		09/15/15 16:36	09/24/15 01:41	1
Indeno[1,2,3-cd]pyrene	ND		0.010		ug/L		09/15/15 16:36	09/24/15 01:41	1
Dibenz(a,h)anthracene	ND		0.010		ug/L		09/15/15 16:36	09/24/15 01:41	1
Benzo[g,h,i]perylene	ND		0.010		ug/L		09/15/15 16:36	09/24/15 01:41	1
<b>Benzo[b]fluoranthene</b>	<b>0.033</b>		0.010		ug/L		09/15/15 16:36	09/24/15 01:41	1
Benzo[k]fluoranthene	ND		0.010		ug/L		09/15/15 16:36	09/24/15 01:41	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Terphenyl-d14	88			64 - 150				09/15/15 16:36	09/24/15 01:41

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050		mg/L			09/17/15 23:53	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	91			50 - 150				09/17/15 23:53	1
Trifluorotoluene (Surr)	101			50 - 150				09/17/15 23:53	1

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.19		0.13		mg/L		09/22/15 11:29	09/29/15 00:14	1
Motor Oil (>C24-C36)	ND		0.31		mg/L		09/22/15 11:29	09/29/15 00:14	1

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53157-1

**Client Sample ID: BD-SC-CHEV-2**

Date Collected: 09/08/15 00:00

Date Received: 09/09/15 11:10

**Lab Sample ID: 580-53157-5**

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o-Terphenyl</i>	99		50 - 150	09/22/15 11:29	09/29/15 00:14	1

## Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.010		mg/L		09/21/15 17:30	09/23/15 03:32	10
<b>Barium</b>	<b>0.26</b>		0.012		mg/L		09/21/15 17:30	09/23/15 03:32	10
Cadmium	ND		0.0040		mg/L		09/21/15 17:30	09/23/15 03:32	10
<b>Chromium</b>	<b>0.017</b>		0.0040		mg/L		09/21/15 17:30	09/23/15 03:32	10
<b>Copper</b>	<b>0.028</b>		0.020		mg/L		09/21/15 17:30	09/23/15 03:32	10
<b>Lead</b>	<b>0.014</b>		0.0040		mg/L		09/21/15 17:30	09/23/15 03:32	10
<b>Manganese</b>	<b>0.81</b>		0.020		mg/L		09/21/15 17:30	09/23/15 03:32	10
Selenium	ND		0.010		mg/L		09/21/15 17:30	09/23/15 03:32	10
Silver	ND		0.0040		mg/L		09/21/15 17:30	09/23/15 03:32	10
<b>Zinc</b>	<b>0.080</b>		0.070		mg/L		09/21/15 17:30	09/23/15 03:32	10

## Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0050		mg/L		09/21/15 14:54	09/22/15 15:59	5
<b>Barium</b>	<b>0.10</b>		0.0060		mg/L		09/21/15 14:54	09/22/15 15:59	5
Cadmium	ND		0.0020		mg/L		09/21/15 14:54	09/22/15 15:59	5
Chromium	ND		0.0020		mg/L		09/21/15 14:54	09/22/15 15:59	5
Copper	ND		0.010		mg/L		09/21/15 14:54	09/22/15 15:59	5
Lead	ND		0.0020		mg/L		09/21/15 14:54	09/22/15 15:59	5
<b>Manganese</b>	<b>0.23</b>		0.010		mg/L		09/21/15 14:54	09/22/15 15:59	5
Selenium	ND		0.0050		mg/L		09/21/15 14:54	09/22/15 15:59	5
Silver	ND		0.0020		mg/L		09/21/15 14:54	09/22/15 15:59	5
Zinc	ND		0.035		mg/L		09/21/15 14:54	09/22/15 15:59	5

## Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		09/22/15 09:36	09/22/15 14:17	1

## Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		09/22/15 09:36	09/22/15 14:21	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	2.2		1.0		mg/L		09/24/15 00:08		1

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53157-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 580-201150/4**

**Matrix: Water**

**Analysis Batch: 201150**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		2.0		ug/L			09/18/15 12:27	1
Ethylbenzene	ND		3.0		ug/L			09/18/15 12:27	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/18/15 12:27	1
m-Xylene & p-Xylene	ND		3.0		ug/L			09/18/15 12:27	1
o-Xylene	ND		2.0		ug/L			09/18/15 12:27	1
Toluene	ND		2.0		ug/L			09/18/15 12:27	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	103		75 - 120		09/18/15 12:27	1
Dibromofluoromethane (Surr)	110		85 - 115		09/18/15 12:27	1
1,2-Dichloroethane-d4 (Surr)	118		70 - 120		09/18/15 12:27	1
Toluene-d8 (Surr)	108		85 - 120		09/18/15 12:27	1
Trifluorotoluene (Surr)	97		70 - 136		09/18/15 12:27	1

**Lab Sample ID: LCS 580-201150/5**

**Matrix: Water**

**Analysis Batch: 201150**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.	Limits
	Added	Result	Qualifier					
Benzene	20.1	17.4		ug/L		87	80 - 120	
Ethylbenzene	20.1	19.6		ug/L		98	75 - 125	
Methyl tert-butyl ether	20.0	17.7		ug/L		88	65 - 125	
m-Xylene & p-Xylene	20.0	19.8		ug/L		99	75 - 130	
o-Xylene	20.0	19.9		ug/L		99	80 - 120	
Toluene	20.0	18.7		ug/L		93	75 - 120	

Surrogate	LCSD	LCSD	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	103		75 - 120			
Dibromofluoromethane (Surr)	103		85 - 115			
1,2-Dichloroethane-d4 (Surr)	112		70 - 120			
Toluene-d8 (Surr)	102		85 - 120			
Trifluorotoluene (Surr)	97		70 - 136			

**Lab Sample ID: LCSD 580-201150/6**

**Matrix: Water**

**Analysis Batch: 201150**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec	%Rec.	RPD	RPD Limit
	Added	Result	Qualifier						
Benzene	20.1	18.9		ug/L		94	80 - 120	8	30
Ethylbenzene	20.1	20.7		ug/L		103	75 - 125	5	30
Methyl tert-butyl ether	20.0	20.2		ug/L		101	65 - 125	14	30
m-Xylene & p-Xylene	20.0	20.9		ug/L		104	75 - 130	5	30
o-Xylene	20.0	21.2		ug/L		106	80 - 120	6	30
Toluene	20.0	20.1		ug/L		101	75 - 120	8	30

Surrogate	LCSD	LCSD	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	98		75 - 120			

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53157-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 580-201150/6**

**Matrix: Water**

**Analysis Batch: 201150**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Dibromofluoromethane (Surr)	108		85 - 115
1,2-Dichloroethane-d4 (Surr)	113		70 - 120
Toluene-d8 (Surr)	107		85 - 120
Trifluorotoluene (Surr)	97		70 - 136

**Lab Sample ID: MB 580-201925/5**

**Matrix: Water**

**Analysis Batch: 201925**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ethylbenzene	ND		3.0		ug/L			09/28/15 16:24	1
<b>Surrogate</b>									
4-Bromofluorobenzene (Surr)									
103									
Dibromofluoromethane (Surr)									
106									
1,2-Dichloroethane-d4 (Surr)									
120									
Toluene-d8 (Surr)									
102									
Trifluorotoluene (Surr)									
97									
70 - 136									

**Lab Sample ID: LCS 580-201925/6**

**Matrix: Water**

**Analysis Batch: 201925**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte		Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ethylbenzene		20.1	19.0		ug/L		94	75 - 125
<b>Surrogate</b>								
4-Bromofluorobenzene (Surr)								
100								
Dibromofluoromethane (Surr)								
110								
1,2-Dichloroethane-d4 (Surr)								
119								
Toluene-d8 (Surr)								
104								
Trifluorotoluene (Surr)								
100								
70 - 136								

**Lab Sample ID: LCSD 580-201925/7**

**Matrix: Water**

**Analysis Batch: 201925**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte		Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ethylbenzene		20.1	19.3		ug/L		96	75 - 125	2	30
<b>Surrogate</b>										
4-Bromofluorobenzene (Surr)										
102										
Dibromofluoromethane (Surr)										
108										
1,2-Dichloroethane-d4 (Surr)										
109										
Toluene-d8 (Surr)										
104										
Trifluorotoluene (Surr)										
100										
70 - 136										

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53157-1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

**Lab Sample ID: MB 580-200834/1-A**

**Matrix: Water**

**Analysis Batch: 201557**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 200834**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Naphthalene	ND		0.010		ug/L		09/15/15 16:36	09/23/15 18:04	1
2-Methylnaphthalene	ND		0.013		ug/L		09/15/15 16:36	09/23/15 18:04	1
1-Methylnaphthalene	ND		0.010		ug/L		09/15/15 16:36	09/23/15 18:04	1
Acenaphthylene	ND		0.010		ug/L		09/15/15 16:36	09/23/15 18:04	1
Acenaphthene	ND		0.010		ug/L		09/15/15 16:36	09/23/15 18:04	1
Fluorene	ND		0.010		ug/L		09/15/15 16:36	09/23/15 18:04	1
Phenanthrene	ND		0.10		ug/L		09/15/15 16:36	09/23/15 18:04	1
Anthracene	ND		0.025		ug/L		09/15/15 16:36	09/23/15 18:04	1
Fluoranthene	ND		0.050		ug/L		09/15/15 16:36	09/23/15 18:04	1
Pyrene	ND		0.050		ug/L		09/15/15 16:36	09/23/15 18:04	1
Benzo[a]anthracene	ND		0.010		ug/L		09/15/15 16:36	09/23/15 18:04	1
Chrysene	ND		0.010		ug/L		09/15/15 16:36	09/23/15 18:04	1
Benzo[a]pyrene	ND		0.010		ug/L		09/15/15 16:36	09/23/15 18:04	1
Indeno[1,2,3-cd]pyrene	ND		0.010		ug/L		09/15/15 16:36	09/23/15 18:04	1
Dibenz(a,h)anthracene	ND		0.010		ug/L		09/15/15 16:36	09/23/15 18:04	1
Benzo[g,h,i]perylene	ND		0.010		ug/L		09/15/15 16:36	09/23/15 18:04	1
Benzo[b]fluoranthene	ND		0.010		ug/L		09/15/15 16:36	09/23/15 18:04	1
Benzo[k]fluoranthene	ND		0.010		ug/L		09/15/15 16:36	09/23/15 18:04	1
Surrogate	MB	MB	%Recovery	Qualifier	Limits	D	Prepared	Analyzed	Dil Fac
Terphenyl-d14			79		64 - 150				1

**Lab Sample ID: LCS 580-200834/2-A**

**Matrix: Water**

**Analysis Batch: 201557**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 200834**

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.	Limits
	Added	Result	Qualifier					
Naphthalene	1.00	0.832		ug/L		83	56 - 125	
2-Methylnaphthalene	1.00	0.879		ug/L		88	56 - 125	
1-Methylnaphthalene	1.00	0.889		ug/L		89	54 - 125	
Acenaphthylene	1.00	0.514	*	ug/L		51	62 - 125	
Acenaphthene	1.00	0.872		ug/L		87	63 - 125	
Fluorene	1.00	0.923		ug/L		92	69 - 125	
Phenanthrene	1.00	0.866		ug/L		87	70 - 125	
Anthracene	1.00	0.341	*	ug/L		34	50 - 125	
Fluoranthene	1.00	1.00		ug/L		100	70 - 145	
Pyrene	1.00	0.926		ug/L		93	70 - 133	
Benzo[a]anthracene	1.00	0.753		ug/L		75	65 - 125	
Chrysene	1.00	0.906		ug/L		91	70 - 125	
Benzo[a]pyrene	1.00	0.239	*	ug/L		24	45 - 125	
Indeno[1,2,3-cd]pyrene	1.00	0.862		ug/L		86	70 - 136	
Dibenz(a,h)anthracene	1.00	0.896		ug/L		90	69 - 154	
Benzo[g,h,i]perylene	1.00	0.769		ug/L		77	65 - 153	
Benzo[b]fluoranthene	1.00	0.859		ug/L		86	70 - 129	
Benzo[k]fluoranthene	1.00	0.905		ug/L		90	70 - 123	

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53157-1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

**Lab Sample ID:** LCS 580-200834/2-A

**Matrix:** Water

**Analysis Batch:** 201557

**Client Sample ID:** Lab Control Sample

**Prep Type:** Total/NA

**Prep Batch:** 200834

Surrogate	LCS	LCS	
	%Recovery	Qualifier	Limits
Terphenyl-d14	91		64 - 150

**Lab Sample ID:** LCSD 580-200834/3-A

**Matrix:** Water

**Analysis Batch:** 201557

**Client Sample ID:** Lab Control Sample Dup

**Prep Type:** Total/NA

**Prep Batch:** 200834

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.	RPD	Limit
Naphthalene	1.00	0.812		ug/L	81	56 - 125	2	20	
2-Methylnaphthalene	1.00	0.845		ug/L	85	56 - 125	4	20	
1-Methylnaphthalene	1.00	0.847		ug/L	85	54 - 125	5	20	
Acenaphthylene	1.00	0.458	*	ug/L	46	62 - 125	12	20	
Acenaphthene	1.00	0.850		ug/L	85	63 - 125	3	20	
Fluorene	1.00	0.920		ug/L	92	69 - 125	0	20	
Phenanthrene	1.00	0.865		ug/L	86	70 - 125	0	20	
Anthracene	1.00	0.351	*	ug/L	35	50 - 125	3	20	
Fluoranthene	1.00	1.02		ug/L	102	70 - 145	2	20	
Pyrene	1.00	0.928		ug/L	93	70 - 133	0	20	
Benzo[a]anthracene	1.00	0.757		ug/L	76	65 - 125	0	20	
Chrysene	1.00	0.904		ug/L	90	70 - 125	0	20	
Benzo[a]pyrene	1.00	0.252	*	ug/L	25	45 - 125	5	20	
Indeno[1,2,3-cd]pyrene	1.00	0.857		ug/L	86	70 - 136	1	20	
Dibenz(a,h)anthracene	1.00	0.900		ug/L	90	69 - 154	0	20	
Benzo[g,h,i]perylene	1.00	0.768		ug/L	77	65 - 153	0	20	
Benzo[b]fluoranthene	1.00	0.879		ug/L	88	70 - 129	2	20	
Benzo[k]fluoranthene	1.00	0.885		ug/L	89	70 - 123	2	20	

Surrogate	LCSD	LCSD	
	%Recovery	Qualifier	Limits
Terphenyl-d14	91		64 - 150

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

**Lab Sample ID:** MB 580-201089/5

**Matrix:** Water

**Analysis Batch:** 201089

**Client Sample ID:** Method Blank

**Prep Type:** Total/NA

Analyte	MB	MB								
	Result	Qualifier		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND			0.050		mg/L			09/17/15 16:09	1
Surrogate	MB	MB								
	%Recovery	Qualifier		Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	89			50 - 150					09/17/15 16:09	1
Trifluorotoluene (Surr)	108			50 - 150					09/17/15 16:09	1

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53157-1

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC) (Continued)

**Lab Sample ID: LCS 580-201089/6**

**Matrix: Water**

**Analysis Batch: 201089**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	Limits
Gasoline	1.16	1.06		mg/L		92	79 - 110
<i>LCS %Recovery Qualifier Limits</i>							
Surrogate							
4-Bromofluorobenzene (Surr)	98		50 - 150				
Trifluorotoluene (Surr)	116		50 - 150				

**Lab Sample ID: LCSD 580-201089/7**

**Matrix: Water**

**Analysis Batch: 201089**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec.	RPD	RPD Limit
Gasoline	1.16	1.02		mg/L		88	79 - 110	5 / 20
<i>LCSD %Recovery Qualifier Limits</i>								
Surrogate								
4-Bromofluorobenzene (Surr)	96		50 - 150					
Trifluorotoluene (Surr)	110		50 - 150					

**Lab Sample ID: MB 580-201222/5**

**Matrix: Water**

**Analysis Batch: 201222**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050		mg/L			09/18/15 21:26	1
<i>MB %Recovery Qualifier Limits Prepared Analyzed Dil Fac</i>									
Surrogate							Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	98		50 - 150					09/18/15 21:26	1
Trifluorotoluene (Surr)	109		50 - 150					09/18/15 21:26	1

**Lab Sample ID: LCS 580-201222/6**

**Matrix: Water**

**Analysis Batch: 201222**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	Limits
Gasoline	1.16	0.951		mg/L		82	79 - 110
<i>LCS %Recovery Qualifier Limits</i>							
Surrogate							
4-Bromofluorobenzene (Surr)	102		50 - 150				
Trifluorotoluene (Surr)	113		50 - 150				

**Lab Sample ID: LCSD 580-201222/7**

**Matrix: Water**

**Analysis Batch: 201222**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec.	RPD	RPD Limit
Gasoline	1.16	0.956		mg/L		82	79 - 110	1 / 20

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53157-1

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC) (Continued)

**Lab Sample ID:** LCSD 580-201222/7

**Matrix:** Water

**Analysis Batch:** 201222

**Client Sample ID:** Lab Control Sample Dup

**Prep Type:** Total/NA

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	102		50 - 150
Trifluorotoluene (Surr)	108		50 - 150

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

**Lab Sample ID:** MB 580-201411/1-A

**Matrix:** Water

**Analysis Batch:** 201839

**Client Sample ID:** Method Blank

**Prep Type:** Total/NA

**Prep Batch:** 201411

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.11		mg/L		09/22/15 11:29	09/28/15 20:56	1
Motor Oil (>C24-C36)	ND		0.25		mg/L		09/22/15 11:29	09/28/15 20:56	1
<hr/>									
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o-Terphenyl</i>	94		50 - 150				09/22/15 11:29	09/28/15 20:56	1

**Lab Sample ID:** LCS 580-201411/2-A

**Matrix:** Water

**Analysis Batch:** 201839

**Client Sample ID:** Lab Control Sample

**Prep Type:** Total/NA

**Prep Batch:** 201411

Analyte		Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.
#2 Diesel (C10-C24)		0.500	0.446		mg/L		89	59 - 120
Motor Oil (>C24-C36)		0.502	0.418		mg/L		83	71 - 140
<hr/>								
Surrogate		MB %Recovery	MB Qualifier	Limits				
<i>o-Terphenyl</i>		97		50 - 150				

**Lab Sample ID:** LCSD 580-201411/3-A

**Matrix:** Water

**Analysis Batch:** 201839

**Client Sample ID:** Lab Control Sample Dup

**Prep Type:** Total/NA

**Prep Batch:** 201411

Analyte		Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.	RPD
#2 Diesel (C10-C24)		0.500	0.441		mg/L		88	59 - 120	1
Motor Oil (>C24-C36)		0.502	0.418		mg/L		83	71 - 140	0
<hr/>									
Surrogate		LCSD %Recovery	LCSD Qualifier	Limits					
<i>o-Terphenyl</i>		97		50 - 150					

## Method: 6020 - Metals (ICP/MS)

**Lab Sample ID:** MB 580-201350/23-A

**Matrix:** Water

**Analysis Batch:** 201490

**Client Sample ID:** Method Blank

**Prep Type:** Total/NA

**Prep Batch:** 201350

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.010		mg/L		09/21/15 17:30	09/23/15 02:14	10
Barium	ND		0.012		mg/L		09/21/15 17:30	09/23/15 02:14	10

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53157-1

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: MB 580-201350/23-A**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 201350**

**MB MB**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cadmium	ND		0.0040		mg/L		09/21/15 17:30	09/23/15 02:14	10
Chromium	ND		0.0040		mg/L		09/21/15 17:30	09/23/15 02:14	10
Copper	ND		0.020		mg/L		09/21/15 17:30	09/23/15 02:14	10
Lead	ND		0.0040		mg/L		09/21/15 17:30	09/23/15 02:14	10
Manganese	ND		0.020		mg/L		09/21/15 17:30	09/23/15 02:14	10
Selenium	ND		0.010		mg/L		09/21/15 17:30	09/23/15 02:14	10
Silver	ND		0.0040		mg/L		09/21/15 17:30	09/23/15 02:14	10
Zinc	ND		0.070		mg/L		09/21/15 17:30	09/23/15 02:14	10

**Lab Sample ID: LCS 580-201350/24-A**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 201350**

**%Rec.**

Analyte		Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits	
Arsenic		4.00	4.03		mg/L		101	80 - 120	
Barium		4.00	4.13		mg/L		103	80 - 120	
Cadmium		0.100	0.102		mg/L		102	80 - 120	
Chromium		0.400	0.405		mg/L		101	80 - 120	
Copper		0.500	0.501		mg/L		100	80 - 120	
Lead		1.00	0.972		mg/L		97	80 - 120	
Manganese		1.00	1.01		mg/L		101	80 - 120	
Selenium		4.00	4.22		mg/L		106	80 - 120	
Silver		0.600	0.587		mg/L		98	80 - 120	
Zinc		4.00	3.99		mg/L		100	80 - 120	

**Lab Sample ID: LCSD 580-201350/25-A**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 201350**

**%Rec.**

Analyte		Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic		4.00	4.01		mg/L		100	80 - 120	0	20
Barium		4.00	4.09		mg/L		102	80 - 120	1	20
Cadmium		0.100	0.101		mg/L		101	80 - 120	0	20
Chromium		0.400	0.399		mg/L		100	80 - 120	1	20
Copper		0.500	0.500		mg/L		100	80 - 120	0	20
Lead		1.00	0.975		mg/L		97	80 - 120	0	20
Manganese		1.00	1.01		mg/L		101	80 - 120	0	20
Selenium		4.00	4.19		mg/L		105	80 - 120	1	20
Silver		0.600	0.590		mg/L		98	80 - 120	0	20
Zinc		4.00	4.01		mg/L		100	80 - 120	0	20

**Lab Sample ID: 580-53155-D-2-C MS**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: Matrix Spike**

**Prep Type: Total/NA**

**Prep Batch: 201350**

**%Rec.**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits	
Arsenic	ND		4.00	4.21		mg/L		105	80 - 120	
Barium	0.063		4.00	4.41		mg/L		109	80 - 120	
Cadmium	ND		0.100	0.105		mg/L		104	80 - 120	

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53157-1

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: 580-53155-D-2-C MS**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: Matrix Spike**

**Prep Type: Total/NA**

**Prep Batch: 201350**

**%Rec.**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits		
Chromium	ND		0.400	0.434		mg/L		108	80 - 120		
Copper	ND		0.500	0.535		mg/L		105	80 - 120		
Lead	ND		1.00	1.05		mg/L		104	80 - 120		
Manganese	5.0		1.00	6.20	4	mg/L		120	80 - 120		
Selenium	ND		4.00	4.44		mg/L		111	80 - 120		
Silver	ND		0.600	0.608		mg/L		101	80 - 120		
Zinc	ND		4.00	4.25		mg/L		105	80 - 120		

**Lab Sample ID: 580-53155-D-2-D MSD**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total/NA**

**Prep Batch: 201350**

**%Rec.**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	ND		4.00	4.25		mg/L		106	80 - 120	1	20
Barium	0.063		4.00	4.42		mg/L		109	80 - 120	0	20
Cadmium	ND		0.100	0.115		mg/L		114	80 - 120	9	20
Chromium	ND		0.400	0.442		mg/L		110	80 - 120	2	20
Copper	ND		0.500	0.536		mg/L		105	80 - 120	0	20
Lead	ND		1.00	1.05		mg/L		105	80 - 120	1	20
Manganese	5.0		1.00	6.30	4	mg/L		129	80 - 120	2	20
Selenium	ND		4.00	4.45		mg/L		111	80 - 120	0	20
Silver	ND		0.600	0.620		mg/L		103	80 - 120	2	20
Zinc	ND		4.00	4.27		mg/L		106	80 - 120	1	20

**Lab Sample ID: 580-53155-D-2-B DU**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: Duplicate**

**Prep Type: Total/NA**

**Prep Batch: 201350**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D				RPD	Limit
Arsenic	ND		ND		mg/L					NC	20
Barium	0.063		0.0606		mg/L					4	20
Cadmium	ND		ND		mg/L					NC	20
Chromium	ND		ND		mg/L					NC	20
Copper	ND		ND		mg/L					NC	20
Lead	ND		ND		mg/L					NC	20
Manganese	5.0		4.95		mg/L					1	20
Selenium	ND		ND		mg/L					NC	20
Silver	ND		ND		mg/L					NC	20
Zinc	ND		ND		mg/L					NC	20

**Lab Sample ID: MB 580-201341/20-A**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: Method Blank**

**Prep Type: Total Recoverable**

**Prep Batch: 201341**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0050		mg/L		09/21/15 14:55	09/22/15 14:55	5
Barium	ND		0.0060		mg/L		09/21/15 14:55	09/22/15 14:55	5
Cadmium	ND		0.0020		mg/L		09/21/15 14:55	09/22/15 14:55	5
Chromium	ND		0.0020		mg/L		09/21/15 14:55	09/22/15 14:55	5

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53157-1

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: MB 580-201341/20-A**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: Method Blank**

**Prep Type: Total Recoverable**

**Prep Batch: 201341**

**MB MB**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Copper	ND		0.010		mg/L		09/21/15 14:55	09/22/15 14:55	5
Lead	ND		0.0020		mg/L		09/21/15 14:55	09/22/15 14:55	5
Manganese	ND		0.010		mg/L		09/21/15 14:55	09/22/15 14:55	5
Selenium	ND		0.0050		mg/L		09/21/15 14:55	09/22/15 14:55	5
Silver	ND		0.0020		mg/L		09/21/15 14:55	09/22/15 14:55	5
Zinc	ND		0.035		mg/L		09/21/15 14:55	09/22/15 14:55	5

**Lab Sample ID: LCS 580-201341/21-A**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total Recoverable**

**Prep Batch: 201341**

**%Rec.**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Arsenic	4.00	4.07		mg/L		102	80 - 120
Barium	4.00	4.17		mg/L		104	80 - 120
Cadmium	0.100	0.104		mg/L		104	80 - 120
Chromium	0.400	0.401		mg/L		100	80 - 120
Copper	0.500	0.501		mg/L		100	80 - 120
Lead	1.00	0.967		mg/L		97	80 - 120
Manganese	1.00	1.00		mg/L		100	80 - 120
Selenium	4.00	4.16		mg/L		104	80 - 120
Silver	0.600	0.582		mg/L		97	80 - 120
Zinc	4.00	4.02		mg/L		100	80 - 120

**Lab Sample ID: LCSD 580-201341/22-A**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total Recoverable**

**Prep Batch: 201341**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	4.00	4.13		mg/L		103	80 - 120	1	20
Barium	4.00	4.25		mg/L		106	80 - 120	2	20
Cadmium	0.100	0.103		mg/L		103	80 - 120	1	20
Chromium	0.400	0.407		mg/L		102	80 - 120	1	20
Copper	0.500	0.511		mg/L		102	80 - 120	2	20
Lead	1.00	0.976		mg/L		98	80 - 120	1	20
Manganese	1.00	1.00		mg/L		100	80 - 120	0	20
Selenium	4.00	4.15		mg/L		104	80 - 120	0	20
Silver	0.600	0.589		mg/L		98	80 - 120	1	20
Zinc	4.00	4.09		mg/L		102	80 - 120	2	20

**Lab Sample ID: LCSSRM 580-201341/23-A**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total Recoverable**

**Prep Batch: 201341**

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	Limits
Arsenic	4.00	4.05		mg/L		101	80 - 120
Barium	4.00	4.18		mg/L		104	80 - 120
Cadmium	0.100	0.107		mg/L		107	80 - 120
Chromium	0.400	0.406		mg/L		102	80 - 120
Copper	0.500	0.493		mg/L		99	80 - 120

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53157-1

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: LCSSRM 580-201341/23-A**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total Recoverable**

**Prep Batch: 201341**

**%Rec.**

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	Limits
Lead	1.00	0.965		mg/L	97	80 - 120	
Manganese	1.00	1.00		mg/L	100	80 - 120	
Selenium	4.00	4.10		mg/L	103	80 - 120	
Silver	0.600	0.580		mg/L	97	80 - 120	
Zinc	4.00	3.98		mg/L	99	80 - 120	

**Lab Sample ID: 580-53150-C-8-C MS**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: Matrix Spike**

**Prep Type: Total Recoverable**

**Prep Batch: 201341**

**%Rec.**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Arsenic	ND		4.00	4.21		mg/L	105	80 - 120	
Barium	ND		4.00	4.31		mg/L	108	80 - 120	
Cadmium	ND		0.100	0.108		mg/L	108	80 - 120	
Chromium	ND		0.400	0.430		mg/L	107	80 - 120	
Copper	ND		0.500	0.518		mg/L	104	80 - 120	
Lead	ND		1.00	1.02		mg/L	102	80 - 120	
Manganese	ND		1.00	1.06		mg/L	106	80 - 120	
Selenium	ND		4.00	4.26		mg/L	106	80 - 120	
Silver	ND		0.600	0.602		mg/L	100	80 - 120	
Zinc	ND		4.00	4.17		mg/L	104	80 - 120	

**Lab Sample ID: 580-53150-C-8-D MSD**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total Recoverable**

**Prep Batch: 201341**

**%Rec.**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	ND		4.00	4.17		mg/L	104	80 - 120		1	20
Barium	ND		4.00	4.18		mg/L	104	80 - 120		3	20
Cadmium	ND		0.100	0.108		mg/L	108	80 - 120		0	20
Chromium	ND		0.400	0.416		mg/L	104	80 - 120		3	20
Copper	ND		0.500	0.507		mg/L	101	80 - 120		2	20
Lead	ND		1.00	0.999		mg/L	100	80 - 120		2	20
Manganese	ND		1.00	1.04		mg/L	104	80 - 120		2	20
Selenium	ND		4.00	4.24		mg/L	106	80 - 120		0	20
Silver	ND		0.600	0.592		mg/L	99	80 - 120		2	20
Zinc	ND		4.00	4.10		mg/L	102	80 - 120		2	20

**Lab Sample ID: 580-53150-C-8-B DU**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: Duplicate**

**Prep Type: Total Recoverable**

**Prep Batch: 201341**

**RPD**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Arsenic	ND		ND		mg/L		NC	20
Barium	ND		ND		mg/L		NC	20
Cadmium	ND		ND		mg/L		NC	20
Chromium	ND		ND		mg/L		NC	20
Copper	ND		ND		mg/L		NC	20
Lead	ND		ND		mg/L		NC	20

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53157-1

## Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 580-53150-C-8-B DU

Matrix: Water

Analysis Batch: 201490

Client Sample ID: Duplicate

Prep Type: Total Recoverable

Prep Batch: 201341

RPD

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Manganese	ND		ND		mg/L		NC	20
Selenium	ND		ND		mg/L		NC	20
Silver	ND		ND		mg/L		NC	20
Zinc	ND		ND		mg/L		NC	20

## Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 580-201181/13-A

Matrix: Water

Analysis Batch: 201449

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 201181

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	ND		0.00020		mg/L		09/22/15 09:36	09/22/15 13:51	1

Lab Sample ID: LCS 580-201181/14-A

Matrix: Water

Analysis Batch: 201449

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 201181

Analyte	Spike	LCS	LCS	Unit	D	%Rec.	Limits	RPD
	Added	Result	Qualifier					
Mercury	0.00200	0.00164		mg/L		82	80 - 120	

Lab Sample ID: LCSD 580-201181/15-A

Matrix: Water

Analysis Batch: 201449

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 201181

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec.	Limits	RPD
	Added	Result	Qualifier					
Mercury	0.00200	0.00170		mg/L		85	80 - 120	3

Lab Sample ID: 580-53157-2 MS

Matrix: Water

Analysis Batch: 201449

Client Sample ID: CR-28A-SC-CHEV

Prep Type: Total/NA

Prep Batch: 201181

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec.	Limits
	Result	Qualifier	Added	Result	Qualifier				
Mercury	ND		0.00200	0.00180		mg/L		83	80 - 120

Lab Sample ID: 580-53157-2 MSD

Matrix: Water

Analysis Batch: 201449

Client Sample ID: CR-28A-SC-CHEV

Prep Type: Total/NA

Prep Batch: 201181

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec.	Limits
	Result	Qualifier	Added	Result	Qualifier				
Mercury	ND		0.00200	0.00182		mg/L		83	80 - 120

Lab Sample ID: 580-53157-2 DU

Matrix: Water

Analysis Batch: 201449

Client Sample ID: CR-28A-SC-CHEV

Prep Type: Total/NA

Prep Batch: 201181

Analyte	Sample	Sample	DU	DU	Unit	D	RPD
	Result	Qualifier	Result	Qualifier			
Mercury	ND		ND		mg/L		NC

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53157-1

## Method: 415.1 - TOC

**Lab Sample ID: MB 580-201591/3**

**Matrix: Water**

**Analysis Batch: 201591**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0		mg/L			09/24/15 00:08	1

**Lab Sample ID: LCS 580-201591/4**

**Matrix: Water**

**Analysis Batch: 201591**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	Limits
Total Organic Carbon		10.0	9.56	mg/L		96	85 - 115

**Lab Sample ID: 580-53289-D-4 MS**

**Matrix: Water**

**Analysis Batch: 201591**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec.	Limits
Total Organic Carbon	12		10.0	22.0		mg/L		104	85 - 115

**Lab Sample ID: 580-53289-D-4 MSD**

**Matrix: Water**

**Analysis Batch: 201591**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	Limits	RPD	RPD Limit
Total Organic Carbon	12		10.0	22.7		mg/L		110	85 - 115	3	20

**Lab Sample ID: 580-53289-D-4 DU**

**Matrix: Water**

**Analysis Batch: 201591**

**Client Sample ID: Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Organic Carbon	12		12.0		mg/L		2	20

TestAmerica Seattle

# Lab Chronicle

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53157-1

**Client Sample ID: TRIP BLANKS**

**Date Collected: 09/08/15 00:00**

**Date Received: 09/09/15 11:10**

**Lab Sample ID: 580-53157-1**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	201150	09/18/15 14:54	K1K	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	201089	09/17/15 18:55	CJ	TAL SEA

**Client Sample ID: CR-28A-SC-CHEV**

**Date Collected: 09/08/15 15:00**

**Date Received: 09/09/15 11:10**

**Lab Sample ID: 580-53157-2**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	201150	09/18/15 17:12	K1K	TAL SEA
Total/NA	Analysis	8260B	DL	10	201925	09/28/15 18:26	TL1	TAL SEA
Total/NA	Prep	3520C			200834	09/15/15 16:36	ERZ	TAL SEA
Total/NA	Analysis	8270C SIM		10	201557	09/24/15 02:12	ERZ	TAL SEA
Total/NA	Prep	3520C	DL		200834	09/15/15 16:36	ERZ	TAL SEA
Total/NA	Analysis	8270C SIM	DL	100	203001	10/10/15 20:56	AHP	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	201089	09/17/15 22:14	CJ	TAL SEA
Total/NA	Prep	3510C			201411	09/22/15 11:29	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	201839	09/28/15 23:20	KW	TAL SEA
Total/NA	Prep	3010A			201350	09/21/15 17:30	PAB	TAL SEA
Total/NA	Analysis	6020		10	201490	09/23/15 03:18	FCW	TAL SEA
Total/NA	Prep	7470A			201181	09/22/15 09:36	PAB	TAL SEA
Total/NA	Analysis	7470A		1	201449	09/22/15 13:58	FCW	TAL SEA
Total/NA	Analysis	415.1		5	201591	09/24/15 00:08	RSB	TAL SEA

**Client Sample ID: CR-28B-SC-CHEV**

**Date Collected: 09/08/15 15:30**

**Date Received: 09/09/15 11:10**

**Lab Sample ID: 580-53157-3**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	201150	09/18/15 17:40	K1K	TAL SEA
Total/NA	Prep	3520C			200834	09/15/15 16:36	ERZ	TAL SEA
Total/NA	Analysis	8270C SIM		1	201557	09/24/15 00:38	ERZ	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	201222	09/19/15 08:42	HDK	TAL SEA
Total/NA	Prep	3510C			201411	09/22/15 11:29	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	201839	09/28/15 23:38	KW	TAL SEA
Total/NA	Prep	3010A			201350	09/21/15 17:30	PAB	TAL SEA
Total/NA	Analysis	6020		10	201490	09/23/15 03:23	FCW	TAL SEA
Total/NA	Prep	7470A			201181	09/22/15 09:36	PAB	TAL SEA
Total/NA	Analysis	7470A		1	201449	09/22/15 14:07	FCW	TAL SEA
Total/NA	Analysis	415.1		1	201591	09/24/15 00:08	RSB	TAL SEA

TestAmerica Seattle

# Lab Chronicle

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53157-1

**Client Sample ID: CR-28C-SC-CHEV**

**Date Collected: 09/08/15 16:00**

**Date Received: 09/09/15 11:10**

**Lab Sample ID: 580-53157-4**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	201150	09/18/15 18:07	K1K	TAL SEA
Total/NA	Prep	3520C			200834	09/15/15 16:36	ERZ	TAL SEA
Total/NA	Analysis	8270C SIM		1	201557	09/24/15 01:09	ERZ	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	201089	09/17/15 23:20	CJ	TAL SEA
Total/NA	Prep	3510C			201411	09/22/15 11:29	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	201839	09/28/15 23:56	KW	TAL SEA
Dissolved	Prep	3005A			201341	09/21/15 14:54	PAB	TAL SEA
Dissolved	Analysis	6020		5	201490	09/22/15 15:54	FCW	TAL SEA
Total/NA	Prep	3010A			201350	09/21/15 17:30	PAB	TAL SEA
Total/NA	Analysis	6020		10	201490	09/23/15 03:27	FCW	TAL SEA
Dissolved	Prep	7470A			201181	09/22/15 09:36	PAB	TAL SEA
Dissolved	Analysis	7470A		1	201449	09/22/15 14:19	FCW	TAL SEA
Total/NA	Prep	7470A			201181	09/22/15 09:36	PAB	TAL SEA
Total/NA	Analysis	7470A		1	201449	09/22/15 14:14	FCW	TAL SEA
Total/NA	Analysis	415.1		1	201591	09/24/15 00:08	RSB	TAL SEA

**Client Sample ID: BD-SC-CHEV-2**

**Date Collected: 09/08/15 00:00**

**Date Received: 09/09/15 11:10**

**Lab Sample ID: 580-53157-5**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	201150	09/18/15 18:34	K1K	TAL SEA
Total/NA	Prep	3520C			200834	09/15/15 16:36	ERZ	TAL SEA
Total/NA	Analysis	8270C SIM		1	201557	09/24/15 01:41	ERZ	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	201089	09/17/15 23:53	CJ	TAL SEA
Total/NA	Prep	3510C			201411	09/22/15 11:29	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	201839	09/29/15 00:14	KW	TAL SEA
Dissolved	Prep	3005A			201341	09/21/15 14:54	PAB	TAL SEA
Dissolved	Analysis	6020		5	201490	09/22/15 15:59	FCW	TAL SEA
Total/NA	Prep	3010A			201350	09/21/15 17:30	PAB	TAL SEA
Total/NA	Analysis	6020		10	201490	09/23/15 03:32	FCW	TAL SEA
Dissolved	Prep	7470A			201181	09/22/15 09:36	PAB	TAL SEA
Dissolved	Analysis	7470A		1	201449	09/22/15 14:21	FCW	TAL SEA
Total/NA	Prep	7470A			201181	09/22/15 09:36	PAB	TAL SEA
Total/NA	Analysis	7470A		1	201449	09/22/15 14:17	FCW	TAL SEA
Total/NA	Analysis	415.1		1	201591	09/24/15 00:08	RSB	TAL SEA

**Laboratory References:**

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

TestAmerica Seattle

# Certification Summary

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53157-1

## Laboratory: TestAmerica Seattle

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-022	03-02-16
California	State Program	9	2901	01-31-17
L-A-B	DoD ELAP		L2236	01-19-16
L-A-B	ISO/IEC 17025		L2236	01-19-16
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-06-15
US Fish & Wildlife	Federal		LE058448-0	02-28-16
USDA	Federal		P330-14-00126	04-08-17
Washington	State Program	10	C553	02-17-16

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TestAmerica Seattle

## Sample Summary

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53157-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-53157-1	TRIP BLANKS	Water	09/08/15 00:00	09/09/15 11:10
580-53157-2	CR-28A-SC-CHEV	Water	09/08/15 15:00	09/09/15 11:10
580-53157-3	CR-28B-SC-CHEV	Water	09/08/15 15:30	09/09/15 11:10
580-53157-4	CR-28C-SC-CHEV	Water	09/08/15 16:00	09/09/15 11:10
580-53157-5	BD-SC-CHEV-2	Water	09/08/15 00:00	09/09/15 11:10

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TestAmerica Seattle

						<input type="checkbox"/> DW <input type="checkbox"/> NPDES <input type="checkbox"/> RCRA <input type="checkbox"/> Other:	
Client Contact		Project Manager: LYNN FENLEY		Site Contact: BRIAN FLEMISTER		Date: 09/08/15	COC No:
Company Name: ARCADIS		Tel/Fax: 503.220.8201 X1119		Lab Contact: SARAH MURPHY		Carrier:	1 of 1 COCs
Address: 111 SW COLUMBIA STE 670		Analysis Turnaround Time					Sampler: 35
City/State/Zip: PORTLAND, OR 97201		<input type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS					For Lab Use Only:
Phone: 503.220.8201		TAT if different from Below					Walk-in Client:
Fax:		<input checked="" type="checkbox"/> 2 weeks					Lab Sampling:
Project Name: 3Q2015 WILLBRIDGE BWM		<input type="checkbox"/> 1 week					
Site: 1001868		<input type="checkbox"/> 2 days					Job / SDG No.:
P O # 3007542/1015.00420		<input type="checkbox"/> 1 day					
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Sample Specific Notes:
TRIP BLANKS		—	—	W			
CR-28A-SC-CHEV		09/08/15	15:00	G	W	10	X X X X X X X X
CR-28B-SC-CHEV		09/08/15	15:30	G	W	10	X X X X X X X X
CR-28C-SC-CHEV		09/08/15	16:00	G	W	12	X X X X X X X X
BD-SC-CHEV-2		09/08/15	—	G	W	12	X X X X X X X X
							only 1/1 Amber for PAH
							only 1/1 Amber for PAH
Preservation Used: 1-Ice 2-HCl 3-H <sub>2</sub> SO <sub>4</sub> 4-HNO <sub>3</sub> 5-NaOH 6-Other							
Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.		Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)					
<input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown		<input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Disposal by Lab <input type="checkbox"/> Archive for _____ Months					
Special Instructions/QC Requirements & Comments: * TOTAL METALS RCRA 8, C12n * INC-2 METHYLNDPHENOL							
PLEASE SEND REPORT TO: BRIAN.FLEMISTER@ARCADIS-US.COM AND BRIAN.MARCON@ARCADIS-US.COM							
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temp. (°C); Obs'd:		Corr'd:	Therm ID No.:
Relinquished by: <i>Mia Climitting</i>		Company: <i>ARCADIS</i>	Date/Time: <i>9/9/15 10:25</i>	Received by: <i>Ammie M</i>	Company: <i>M-E.</i>	Date/Time: <i>9/9/15 1025</i>	
Relinquished by: <i>Jenin M</i>		Company: <i>M-E.</i>	Date/Time: <i>9/9/15 11:00</i>	Received by: <i>Jenin M</i>	Company: <i>TAP</i>	Date/Time: <i>9/9/15 11:00</i>	
Relinquished by: <i>ESD</i>		Company: <i>TAP</i>	Date/Time: <i>9/9/15 17:00</i>	Received in Laboratory by: <i>Neale J</i>	Company: <i>TASSA</i>	Date/Time: <i>9/10/15 10:30</i>	

2.11 L 100 cooler 2 <sup>0.9/0.4</sup> <sub>102</sub> 1.7/1.1R1 ~~NP~~ cooler 1 0.6, 1.2, 0.5, 1.0 1R/G-L

## Login Sample Receipt Checklist

Client: ARCADIS U.S. Inc

Job Number: 580-53157-1

**Login Number: 53157**

**List Source: TestAmerica Seattle**

**List Number: 1**

**Creator: Gonzales, Steve**

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

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# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Seattle

5755 8th Street East

Tacoma, WA 98424

Tel: (253)922-2310

TestAmerica Job ID: 580-53197-1

Client Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

For:

ARCADIS U.S. Inc

111 SW Columbia Street

Suite 670

Portland, Oregon 97201

Attn: Brian Marcum

*Sarah Murphy*

Authorized for release by:

10/13/2015 4:36:42 PM

Sarah Murphy, Project Manager I

(253)922-2310

[sarah.murphy@testamericainc.com](mailto:sarah.murphy@testamericainc.com)

### LINKS

Review your project  
results through

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The  
Expert

Visit us at:

[www.testamericainc.com](http://www.testamericainc.com)

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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# Case Narrative

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53197-1

## Job ID: 580-53197-1

### Laboratory: TestAmerica Seattle

#### Narrative

##### Job Narrative 580-53197-1

#### Receipt

The samples were received on 9/10/2015 11:40 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 1.7° C and 1.8° C.

#### GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### GC/MS Semi VOA

Method(s) 8270C SIM: The following analyte(s) recovered outside control limits for the LCS/LCSD associated with preparation batch 580-200834 and 580-200834 and analytical batch 580-201557: Anthracene, Acenaphthylene and Benzo[a]pyrene. These analytes were outside the Marginal Exceedance Limits and/or were indicative of a systematic problem; therefore, re-extraction and/or re-analysis was performed. Re-analysis yielded little or no improvement in QC results (AB 202733); therefore, original set of data have been qualified and reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### GC Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Definitions/Glossary

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53197-1

## Qualifiers

### GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.

### Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

## Glossary

### Abbreviation

**These commonly used abbreviations may or may not be present in this report.**

□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53197-1

## Client Sample ID: TRIP BLANKS

Date Collected: 09/09/15 00:00

Date Received: 09/10/15 11:40

## Lab Sample ID: 580-53197-1

Matrix: Water

### Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			09/19/15 19:43	1
Ethylbenzene	ND		3.0		ug/L			09/19/15 19:43	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/19/15 19:43	1
m-Xylene & p-Xylene	ND		3.0		ug/L			09/19/15 19:43	1
o-Xylene	ND		2.0		ug/L			09/19/15 19:43	1
Toluene	ND		2.0		ug/L			09/19/15 19:43	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	109			75 - 120				09/19/15 19:43	1
Dibromofluoromethane (Surr)	99			85 - 115				09/19/15 19:43	1
1,2-Dichloroethane-d4 (Surr)	102			70 - 120				09/19/15 19:43	1
Toluene-d8 (Surr)	96			85 - 120				09/19/15 19:43	1
Trifluorotoluene (Surr)	99			70 - 136				09/19/15 19:43	1

### Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050		mg/L			09/18/15 22:40	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	91			50 - 150				09/18/15 22:40	1
Trifluorotoluene (Surr)	114			50 - 150				09/18/15 22:40	1

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53197-1

**Client Sample ID: B-11-SC-CHEV**

Date Collected: 09/09/15 11:30

Date Received: 09/10/15 11:40

**Lab Sample ID: 580-53197-2**

Matrix: Water

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			09/19/15 21:31	1
Ethylbenzene	ND		3.0		ug/L			09/19/15 21:31	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/19/15 21:31	1
m-Xylene & p-Xylene	ND		3.0		ug/L			09/19/15 21:31	1
o-Xylene	ND		2.0		ug/L			09/19/15 21:31	1
Toluene	ND		2.0		ug/L			09/19/15 21:31	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	108			75 - 120				09/19/15 21:31	1
Dibromofluoromethane (Surr)	101			85 - 115				09/19/15 21:31	1
1,2-Dichloroethane-d4 (Surr)	104			70 - 120				09/19/15 21:31	1
Toluene-d8 (Surr)	98			85 - 120				09/19/15 21:31	1
Trifluorotoluene (Surr)	102			70 - 136				09/19/15 21:31	1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.011		ug/L		09/15/15 16:36	09/23/15 19:42	1
2-Methylnaphthalene	ND		0.014		ug/L		09/15/15 16:36	09/23/15 19:42	1
1-Methylnaphthalene	ND		0.011		ug/L		09/15/15 16:36	09/23/15 19:42	1
Acenaphthylene	ND *		0.011		ug/L		09/15/15 16:36	09/23/15 19:42	1
Acenaphthene	ND		0.011		ug/L		09/15/15 16:36	09/23/15 19:42	1
Fluorene	ND		0.011		ug/L		09/15/15 16:36	09/23/15 19:42	1
Phenanthrene	ND		0.11		ug/L		09/15/15 16:36	09/23/15 19:42	1
Anthracene	ND *		0.028		ug/L		09/15/15 16:36	09/23/15 19:42	1
Fluoranthene	ND		0.055		ug/L		09/15/15 16:36	09/23/15 19:42	1
Pyrene	ND		0.055		ug/L		09/15/15 16:36	09/23/15 19:42	1
Benzo[a]anthracene	ND		0.011		ug/L		09/15/15 16:36	09/23/15 19:42	1
Chrysene	ND		0.011		ug/L		09/15/15 16:36	09/23/15 19:42	1
Benzo[a]pyrene	ND *		0.011		ug/L		09/15/15 16:36	09/23/15 19:42	1
Indeno[1,2,3-cd]pyrene	ND		0.011		ug/L		09/15/15 16:36	09/23/15 19:42	1
Dibenz(a,h)anthracene	ND		0.011		ug/L		09/15/15 16:36	09/23/15 19:42	1
Benzo[g,h,i]perylene	ND		0.011		ug/L		09/15/15 16:36	09/23/15 19:42	1
Benzo[b]fluoranthene	ND		0.011		ug/L		09/15/15 16:36	09/23/15 19:42	1
Benzo[k]fluoranthene	ND		0.011		ug/L		09/15/15 16:36	09/23/15 19:42	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Terphenyl-d14	81			64 - 150				09/15/15 16:36	09/23/15 19:42

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050		mg/L			09/22/15 19:28	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	93			50 - 150				09/22/15 19:28	1
Trifluorotoluene (Surr)	107			50 - 150				09/22/15 19:28	1

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	1.1		0.12		mg/L		09/22/15 11:29	09/29/15 00:32	1
Motor Oil (>C24-C36)	0.28		0.26		mg/L		09/22/15 11:29	09/29/15 00:32	1

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53197-1

**Client Sample ID: B-11-SC-CHEV**

**Date Collected: 09/09/15 11:30**

**Date Received: 09/10/15 11:40**

**Lab Sample ID: 580-53197-2**

**Matrix: Water**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o-Terphenyl</i>	109		50 - 150	09/22/15 11:29	09/29/15 00:32	1

**Method: 6020 - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.018		0.010		mg/L		09/21/15 17:30	09/23/15 03:36	10
Barium	0.13		0.012		mg/L		09/21/15 17:30	09/23/15 03:36	10
Cadmium	ND		0.0040		mg/L		09/21/15 17:30	09/23/15 03:36	10
Chromium	ND		0.0040		mg/L		09/21/15 17:30	09/23/15 03:36	10
Copper	ND		0.020		mg/L		09/21/15 17:30	09/23/15 03:36	10
Lead	ND		0.0040		mg/L		09/21/15 17:30	09/23/15 03:36	10
Manganese	7.9		0.020		mg/L		09/21/15 17:30	09/23/15 03:36	10
Selenium	ND		0.010		mg/L		09/21/15 17:30	09/23/15 03:36	10
Silver	ND		0.0040		mg/L		09/21/15 17:30	09/23/15 03:36	10
Zinc	ND		0.070		mg/L		09/21/15 17:30	09/23/15 03:36	10

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		09/24/15 10:49	09/24/15 15:42	1

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53197-1

**Client Sample ID: CR-29B-SC-CHEV**

**Lab Sample ID: 580-53197-3**

**Matrix: Water**

Date Collected: 09/09/15 14:20

Date Received: 09/10/15 11:40

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			09/19/15 21:58	1
Ethylbenzene	ND		3.0		ug/L			09/19/15 21:58	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/19/15 21:58	1
m-Xylene & p-Xylene	ND		3.0		ug/L			09/19/15 21:58	1
o-Xylene	ND		2.0		ug/L			09/19/15 21:58	1
Toluene	ND		2.0		ug/L			09/19/15 21:58	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	105			75 - 120				09/19/15 21:58	1
Dibromofluoromethane (Surr)	102			85 - 115				09/19/15 21:58	1
1,2-Dichloroethane-d4 (Surr)	104			70 - 120				09/19/15 21:58	1
Toluene-d8 (Surr)	96			85 - 120				09/19/15 21:58	1
Trifluorotoluene (Surr)	99			70 - 136				09/19/15 21:58	1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.011		ug/L		09/15/15 16:36	09/23/15 20:14	1
2-Methylnaphthalene	ND		0.014		ug/L		09/15/15 16:36	09/23/15 20:14	1
1-Methylnaphthalene	ND		0.011		ug/L		09/15/15 16:36	09/23/15 20:14	1
Acenaphthylene	ND *		0.011		ug/L		09/15/15 16:36	09/23/15 20:14	1
Acenaphthene	ND		0.011		ug/L		09/15/15 16:36	09/23/15 20:14	1
Fluorene	ND		0.011		ug/L		09/15/15 16:36	09/23/15 20:14	1
Phenanthrene	ND		0.11		ug/L		09/15/15 16:36	09/23/15 20:14	1
Anthracene	ND *		0.027		ug/L		09/15/15 16:36	09/23/15 20:14	1
Fluoranthene	ND		0.053		ug/L		09/15/15 16:36	09/23/15 20:14	1
Pyrene	ND		0.053		ug/L		09/15/15 16:36	09/23/15 20:14	1
Benzo[a]anthracene	ND		0.011		ug/L		09/15/15 16:36	09/23/15 20:14	1
Chrysene	ND		0.011		ug/L		09/15/15 16:36	09/23/15 20:14	1
Benzo[a]pyrene	ND *		0.011		ug/L		09/15/15 16:36	09/23/15 20:14	1
Indeno[1,2,3-cd]pyrene	ND		0.011		ug/L		09/15/15 16:36	09/23/15 20:14	1
Dibenz(a,h)anthracene	ND		0.011		ug/L		09/15/15 16:36	09/23/15 20:14	1
Benzo[g,h,i]perylene	ND		0.011		ug/L		09/15/15 16:36	09/23/15 20:14	1
Benzo[b]fluoranthene	ND		0.011		ug/L		09/15/15 16:36	09/23/15 20:14	1
Benzo[k]fluoranthene	ND		0.011		ug/L		09/15/15 16:36	09/23/15 20:14	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Terphenyl-d14	73			64 - 150				09/15/15 16:36	09/23/15 20:14

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050		mg/L			09/22/15 18:56	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	92			50 - 150				09/22/15 18:56	1
Trifluorotoluene (Surr)	107			50 - 150				09/22/15 18:56	1

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.24		0.12		mg/L		09/22/15 11:29	09/29/15 00:50	1
Motor Oil (>C24-C36)	ND		0.28		mg/L		09/22/15 11:29	09/29/15 00:50	1

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53197-1

## Client Sample ID: CR-29B-SC-CHEV

Date Collected: 09/09/15 14:20

Date Received: 09/10/15 11:40

## Lab Sample ID: 580-53197-3

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o-Terphenyl</i>	101		50 - 150	09/22/15 11:29	09/29/15 00:50	1

### Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.010		0.010		mg/L		09/21/15 17:30	09/23/15 03:41	10
Barium	0.18		0.012		mg/L		09/21/15 17:30	09/23/15 03:41	10
Cadmium	ND		0.0040		mg/L		09/21/15 17:30	09/23/15 03:41	10
Chromium	0.010		0.0040		mg/L		09/21/15 17:30	09/23/15 03:41	10
Copper	ND		0.020		mg/L		09/21/15 17:30	09/23/15 03:41	10
Lead	0.0062		0.0040		mg/L		09/21/15 17:30	09/23/15 03:41	10
Manganese	8.8		0.020		mg/L		09/21/15 17:30	09/23/15 03:41	10
Selenium	ND		0.010		mg/L		09/21/15 17:30	09/23/15 03:41	10
Silver	ND		0.0040		mg/L		09/21/15 17:30	09/23/15 03:41	10
Zinc	ND		0.070		mg/L		09/21/15 17:30	09/23/15 03:41	10

### Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0060		0.0050		mg/L		09/22/15 07:47	09/22/15 23:15	5
Barium	0.10		0.0060		mg/L		09/22/15 07:47	09/22/15 23:15	5
Cadmium	ND		0.0020		mg/L		09/22/15 07:47	09/22/15 23:15	5
Chromium	ND		0.0020		mg/L		09/22/15 07:47	09/22/15 23:15	5
Copper	ND		0.010		mg/L		09/22/15 07:47	09/22/15 23:15	5
Lead	ND		0.0020		mg/L		09/22/15 07:47	09/22/15 23:15	5
Manganese	8.9		0.010		mg/L		09/22/15 07:47	09/22/15 23:15	5
Selenium	ND		0.0050		mg/L		09/22/15 07:47	09/22/15 23:15	5
Silver	ND		0.0020		mg/L		09/22/15 07:47	09/22/15 23:15	5
Zinc	ND		0.035		mg/L		09/22/15 07:47	09/22/15 23:15	5

### Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		09/24/15 10:49	09/24/15 15:44	1

### Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		09/24/15 10:49	09/24/15 15:37	1

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53197-1

**Client Sample ID: B-26-SC-CHEV**

Date Collected: 09/09/15 16:35

Date Received: 09/10/15 11:40

**Lab Sample ID: 580-53197-4**

Matrix: Water

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			09/19/15 22:24	1
Ethylbenzene	9.9		3.0		ug/L			09/19/15 22:24	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/19/15 22:24	1
m-Xylene & p-Xylene	ND		3.0		ug/L			09/19/15 22:24	1
o-Xylene	ND		2.0		ug/L			09/19/15 22:24	1
Toluene	ND		2.0		ug/L			09/19/15 22:24	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	109			75 - 120				09/19/15 22:24	1
Dibromofluoromethane (Surr)	99			85 - 115				09/19/15 22:24	1
1,2-Dichloroethane-d4 (Surr)	105			70 - 120				09/19/15 22:24	1
Toluene-d8 (Surr)	98			85 - 120				09/19/15 22:24	1
Trifluorotoluene (Surr)	101			70 - 136				09/19/15 22:24	1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	0.53		0.011		ug/L		09/15/15 16:36	09/23/15 20:47	1
2-Methylnaphthalene	0.40		0.014		ug/L		09/15/15 16:36	09/23/15 20:47	1
1-Methylnaphthalene	1.9		0.011		ug/L		09/15/15 16:36	09/23/15 20:47	1
Acenaphthylene	0.022 *		0.011		ug/L		09/15/15 16:36	09/23/15 20:47	1
Acenaphthene	0.28		0.011		ug/L		09/15/15 16:36	09/23/15 20:47	1
Fluorene	0.095		0.011		ug/L		09/15/15 16:36	09/23/15 20:47	1
Phenanthrene	ND		0.11		ug/L		09/15/15 16:36	09/23/15 20:47	1
Anthracene	ND *		0.028		ug/L		09/15/15 16:36	09/23/15 20:47	1
Fluoranthene	0.093		0.055		ug/L		09/15/15 16:36	09/23/15 20:47	1
Pyrene	0.18		0.055		ug/L		09/15/15 16:36	09/23/15 20:47	1
Benzo[a]anthracene	0.025		0.011		ug/L		09/15/15 16:36	09/23/15 20:47	1
Chrysene	0.023		0.011		ug/L		09/15/15 16:36	09/23/15 20:47	1
Benzo[a]pyrene	ND *		0.011		ug/L		09/15/15 16:36	09/23/15 20:47	1
Indeno[1,2,3-cd]pyrene	0.011		0.011		ug/L		09/15/15 16:36	09/23/15 20:47	1
Dibenz(a,h)anthracene	ND		0.011		ug/L		09/15/15 16:36	09/23/15 20:47	1
Benzo[g,h,i]perylene	ND		0.011		ug/L		09/15/15 16:36	09/23/15 20:47	1
Benzo[b]fluoranthene	0.023		0.011		ug/L		09/15/15 16:36	09/23/15 20:47	1
Benzo[k]fluoranthene	ND		0.011		ug/L		09/15/15 16:36	09/23/15 20:47	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Terphenyl-d14	77			64 - 150				09/15/15 16:36	09/23/15 20:47

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	1.1		0.050		mg/L			09/22/15 20:35	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	123			50 - 150				09/22/15 20:35	1
Trifluorotoluene (Surr)	106			50 - 150				09/22/15 20:35	1

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	2.6		0.12		mg/L		09/22/15 11:29	10/12/15 10:50	1
Motor Oil (>C24-C36)	0.64		0.28		mg/L		09/22/15 11:29	10/12/15 10:50	1

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53197-1

**Client Sample ID: B-26-SC-CHEV**

Date Collected: 09/09/15 16:35

Date Received: 09/10/15 11:40

**Lab Sample ID: 580-53197-4**

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o-Terphenyl</i>	113		50 - 150	09/22/15 11:29	10/12/15 10:50	1

**Method: 6020 - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.049		0.010		mg/L		09/21/15 17:30	09/23/15 03:59	10
Barium	0.096		0.012		mg/L		09/21/15 17:30	09/23/15 03:59	10
Cadmium	0.0073		0.0040		mg/L		09/21/15 17:30	09/23/15 03:59	10
Chromium	ND		0.0040		mg/L		09/21/15 17:30	09/23/15 03:59	10
Copper	ND		0.020		mg/L		09/21/15 17:30	09/23/15 03:59	10
Lead	0.0094		0.0040		mg/L		09/21/15 17:30	09/23/15 03:59	10
Manganese	4.4		0.020		mg/L		09/21/15 17:30	09/23/15 03:59	10
Selenium	ND		0.010		mg/L		09/21/15 17:30	09/23/15 03:59	10
Silver	ND		0.0040		mg/L		09/21/15 17:30	09/23/15 03:59	10
Zinc	0.25		0.070		mg/L		09/21/15 17:30	09/23/15 03:59	10

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		09/24/15 10:49	09/24/15 15:40	1

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53197-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 580-201253/4**

**Matrix: Water**

**Analysis Batch: 201253**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		2.0		ug/L			09/19/15 14:51	1
Ethylbenzene	ND		3.0		ug/L			09/19/15 14:51	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/19/15 14:51	1
m-Xylene & p-Xylene	ND		3.0		ug/L			09/19/15 14:51	1
o-Xylene	ND		2.0		ug/L			09/19/15 14:51	1
Toluene	ND		2.0		ug/L			09/19/15 14:51	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	104		75 - 120		09/19/15 14:51	1
Dibromofluoromethane (Surr)	98		85 - 115		09/19/15 14:51	1
1,2-Dichloroethane-d4 (Surr)	97		70 - 120		09/19/15 14:51	1
Toluene-d8 (Surr)	98		85 - 120		09/19/15 14:51	1
Trifluorotoluene (Surr)	105		70 - 136		09/19/15 14:51	1

**Lab Sample ID: LCS 580-201253/5**

**Matrix: Water**

**Analysis Batch: 201253**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike	LCS	LCS	D	%Rec	%Rec.	Limits
	Added	Result	Qualifier				
Benzene	20.1	19.1		ug/L	95	80 - 120	
Ethylbenzene	20.1	18.5		ug/L	92	75 - 125	
Methyl tert-butyl ether	20.0	22.1		ug/L	110	65 - 125	
m-Xylene & p-Xylene	20.0	19.8		ug/L	99	75 - 130	
o-Xylene	20.0	19.9		ug/L	99	80 - 120	
Toluene	20.0	18.8		ug/L	94	75 - 120	

Surrogate	LCS	LCS	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	105		75 - 120			
Dibromofluoromethane (Surr)	101		85 - 115			
1,2-Dichloroethane-d4 (Surr)	104		70 - 120			
Toluene-d8 (Surr)	94		85 - 120			
Trifluorotoluene (Surr)	102		70 - 136			

**Lab Sample ID: LCSD 580-201253/6**

**Matrix: Water**

**Analysis Batch: 201253**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike	LCSD	LCSD	D	%Rec	%Rec.	RPD	RPD Limit
	Added	Result	Qualifier					
Benzene	20.1	18.7		ug/L	93	80 - 120	2	30
Ethylbenzene	20.1	18.6		ug/L	93	75 - 125	0	30
Methyl tert-butyl ether	20.0	19.5		ug/L	97	65 - 125	13	30
m-Xylene & p-Xylene	20.0	19.8		ug/L	99	75 - 130	0	30
o-Xylene	20.0	19.5		ug/L	97	80 - 120	2	30
Toluene	20.0	18.5		ug/L	92	75 - 120	1	30

Surrogate	LCSD	LCSD	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	105		75 - 120			

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53197-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID:** LCSD 580-201253/6

**Matrix:** Water

**Analysis Batch:** 201253

**Client Sample ID:** Lab Control Sample Dup

**Prep Type:** Total/NA

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Dibromofluoromethane (Surr)	99		85 - 115
1,2-Dichloroethane-d4 (Surr)	97		70 - 120
Toluene-d8 (Surr)	96		85 - 120
Trifluorotoluene (Surr)	104		70 - 136

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

**Lab Sample ID:** MB 580-200834/1-A

**Matrix:** Water

**Analysis Batch:** 201557

**Client Sample ID:** Method Blank

**Prep Type:** Total/NA

**Prep Batch:** 200834

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	MB	MB	MB	MB	MB		MB	MB	
Naphthalene	ND		0.010		ug/L	09/15/15 16:36	09/23/15 18:04		1
2-Methylnaphthalene	ND		0.013		ug/L	09/15/15 16:36	09/23/15 18:04		1
1-Methylnaphthalene	ND		0.010		ug/L	09/15/15 16:36	09/23/15 18:04		1
Acenaphthylene	ND		0.010		ug/L	09/15/15 16:36	09/23/15 18:04		1
Acenaphthene	ND		0.010		ug/L	09/15/15 16:36	09/23/15 18:04		1
Fluorene	ND		0.010		ug/L	09/15/15 16:36	09/23/15 18:04		1
Phenanthrene	ND		0.10		ug/L	09/15/15 16:36	09/23/15 18:04		1
Anthracene	ND		0.025		ug/L	09/15/15 16:36	09/23/15 18:04		1
Fluoranthene	ND		0.050		ug/L	09/15/15 16:36	09/23/15 18:04		1
Pyrene	ND		0.050		ug/L	09/15/15 16:36	09/23/15 18:04		1
Benzo[a]anthracene	ND		0.010		ug/L	09/15/15 16:36	09/23/15 18:04		1
Chrysene	ND		0.010		ug/L	09/15/15 16:36	09/23/15 18:04		1
Benzo[a]pyrene	ND		0.010		ug/L	09/15/15 16:36	09/23/15 18:04		1
Indeno[1,2,3-cd]pyrene	ND		0.010		ug/L	09/15/15 16:36	09/23/15 18:04		1
Dibenz(a,h)anthracene	ND		0.010		ug/L	09/15/15 16:36	09/23/15 18:04		1
Benzo[g,h,i]perylene	ND		0.010		ug/L	09/15/15 16:36	09/23/15 18:04		1
Benzo[b]fluoranthene	ND		0.010		ug/L	09/15/15 16:36	09/23/15 18:04		1
Benzo[k]fluoranthene	ND		0.010		ug/L	09/15/15 16:36	09/23/15 18:04		1
Surrogate	MB %Recovery	MB Qualifier	MB Limits			Prepared	Analyzed	Dil Fac	
Terphenyl-d14	79		64 - 150			09/15/15 16:36	09/23/15 18:04		1

**Lab Sample ID:** LCS 580-200834/2-A

**Matrix:** Water

**Analysis Batch:** 201557

**Client Sample ID:** Lab Control Sample

**Prep Type:** Total/NA

**Prep Batch:** 200834

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits	%Rec.
	Added	Result	Qualifier	Unit				
Naphthalene	1.00	0.832		ug/L	83	56 - 125		
2-Methylnaphthalene	1.00	0.879		ug/L	88	56 - 125		
1-Methylnaphthalene	1.00	0.889		ug/L	89	54 - 125		
Acenaphthylene	1.00	0.514	*	ug/L	51	62 - 125		
Acenaphthene	1.00	0.872		ug/L	87	63 - 125		
Fluorene	1.00	0.923		ug/L	92	69 - 125		
Phenanthrene	1.00	0.866		ug/L	87	70 - 125		
Anthracene	1.00	0.341	*	ug/L	34	50 - 125		

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53197-1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

**Lab Sample ID: LCS 580-200834/2-A**

**Matrix: Water**

**Analysis Batch: 201557**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 200834**

**%Rec.**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Fluoranthene	1.00	1.00		ug/L		100	70 - 145
Pyrene	1.00	0.926		ug/L		93	70 - 133
Benzo[a]anthracene	1.00	0.753		ug/L		75	65 - 125
Chrysene	1.00	0.906		ug/L		91	70 - 125
Benzo[a]pyrene	1.00	0.239 *		ug/L		24	45 - 125
Indeno[1,2,3-cd]pyrene	1.00	0.862		ug/L		86	70 - 136
Dibenz(a,h)anthracene	1.00	0.896		ug/L		90	69 - 154
Benzo[g,h,i]perylene	1.00	0.769		ug/L		77	65 - 153
Benzo[b]fluoranthene	1.00	0.859		ug/L		86	70 - 129
Benzo[k]fluoranthene	1.00	0.905		ug/L		90	70 - 123
<b>Surrogate</b>		<b>LCS</b>	<b>LCS</b>				
<i>Terphenyl-d14</i>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			
		91		64 - 150			

**Lab Sample ID: LCSD 580-200834/3-A**

**Matrix: Water**

**Analysis Batch: 201557**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 200834**

**%Rec.**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Naphthalene	1.00	0.812		ug/L		81	56 - 125	2	20
2-Methylnaphthalene	1.00	0.845		ug/L		85	56 - 125	4	20
1-Methylnaphthalene	1.00	0.847		ug/L		85	54 - 125	5	20
Acenaphthylene	1.00	0.458 *		ug/L		46	62 - 125	12	20
Acenaphthene	1.00	0.850		ug/L		85	63 - 125	3	20
Fluorene	1.00	0.920		ug/L		92	69 - 125	0	20
Phenanthrene	1.00	0.865		ug/L		86	70 - 125	0	20
Anthracene	1.00	0.351 *		ug/L		35	50 - 125	3	20
Fluoranthene	1.00	1.02		ug/L		102	70 - 145	2	20
Pyrene	1.00	0.928		ug/L		93	70 - 133	0	20
Benzo[a]anthracene	1.00	0.757		ug/L		76	65 - 125	0	20
Chrysene	1.00	0.904		ug/L		90	70 - 125	0	20
Benzo[a]pyrene	1.00	0.252 *		ug/L		25	45 - 125	5	20
Indeno[1,2,3-cd]pyrene	1.00	0.857		ug/L		86	70 - 136	1	20
Dibenz(a,h)anthracene	1.00	0.900		ug/L		90	69 - 154	0	20
Benzo[g,h,i]perylene	1.00	0.768		ug/L		77	65 - 153	0	20
Benzo[b]fluoranthene	1.00	0.879		ug/L		88	70 - 129	2	20
Benzo[k]fluoranthene	1.00	0.885		ug/L		89	70 - 123	2	20
<b>Surrogate</b>		<b>LCSD</b>	<b>LCSD</b>						
<i>Terphenyl-d14</i>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>					
		91		64 - 150					

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53197-1

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

**Lab Sample ID: MB 580-201218/5**

**Matrix: Water**

**Analysis Batch: 201218**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Gasoline	ND		0.050		mg/L			09/18/15 21:00	1
<b>Surrogate</b>									
4-Bromofluorobenzene (Surr)									
Trifluorotoluene (Surr)	91		50 - 150				Prepared	09/18/15 21:00	1
Trifluorotoluene (Surr)	109		50 - 150					09/18/15 21:00	1

**Lab Sample ID: LCS 580-201218/6**

**Matrix: Water**

**Analysis Batch: 201218**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	MB	MB	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	%Rec. Limits
	Result	Qualifier							
Gasoline	ND		1.16	1.03		mg/L		88	79 - 110
<b>Surrogate</b>									
4-Bromofluorobenzene (Surr)									
Trifluorotoluene (Surr)	97		50 - 150						
Trifluorotoluene (Surr)	110		50 - 150						

**Lab Sample ID: LCSD 580-201218/7**

**Matrix: Water**

**Analysis Batch: 201218**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	MB	MB	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec.	%Rec. Limits	RPD	RPD Limit
	Result	Qualifier									
Gasoline	ND		1.16	1.08		mg/L		93	79 - 110	5	20
<b>Surrogate</b>											
4-Bromofluorobenzene (Surr)											
Trifluorotoluene (Surr)	98		50 - 150								
Trifluorotoluene (Surr)	115		50 - 150								

**Lab Sample ID: MB 580-201455/5**

**Matrix: Water**

**Analysis Batch: 201455**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB	MB	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	%Rec. Limits	Dil Fac
	Result	Qualifier								
Gasoline	ND		0.050			mg/L				1
<b>Surrogate</b>										
4-Bromofluorobenzene (Surr)										
Trifluorotoluene (Surr)	92		50 - 150				Prepared	09/22/15 16:42		1
Trifluorotoluene (Surr)	108		50 - 150					09/22/15 16:42		1

**Lab Sample ID: LCS 580-201455/6**

**Matrix: Water**

**Analysis Batch: 201455**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	MB	MB	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	%Rec. Limits	Dil Fac
	Result	Qualifier								
Gasoline	ND		1.16	1.07		mg/L		92	79 - 110	

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53197-1

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC) (Continued)

**Lab Sample ID: LCS 580-201455/6**

**Matrix: Water**

**Analysis Batch: 201455**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	98		50 - 150
Trifluorotoluene (Surr)	113		50 - 150

**Lab Sample ID: LCSD 580-201455/7**

**Matrix: Water**

**Analysis Batch: 201455**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec.	RPD
				mg/L		Limits	Limit
Gasoline	1.16	1.09		mg/L		94	79 - 110

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	97		50 - 150
Trifluorotoluene (Surr)	115		50 - 150

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

**Lab Sample ID: MB 580-201411/1-A**

**Matrix: Water**

**Analysis Batch: 201839**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 201411**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
				mg/L			09/22/15 11:29	09/28/15 20:56	1
#2 Diesel (C10-C24)	ND		0.11						
Motor Oil (>C24-C36)	ND		0.25		mg/L		09/22/15 11:29	09/28/15 20:56	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
				09/22/15 11:29	09/28/15 20:56	1
<i>o-Terphenyl</i>	94		50 - 150			

**Lab Sample ID: LCS 580-201411/2-A**

**Matrix: Water**

**Analysis Batch: 201839**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 201411**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.
				mg/L		Limits
#2 Diesel (C10-C24)	0.500	0.446		mg/L		89
Motor Oil (>C24-C36)	0.502	0.418		mg/L		83

Surrogate	LCS %Recovery	LCS Qualifier	Limits
<i>o-Terphenyl</i>	97		50 - 150

**Lab Sample ID: LCSD 580-201411/3-A**

**Matrix: Water**

**Analysis Batch: 201839**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 201411**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec.
				mg/L		RPD
#2 Diesel (C10-C24)	0.500	0.441		mg/L		88
Motor Oil (>C24-C36)	0.502	0.418		mg/L		83

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53197-1

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: LCSD 580-201411/3-A

Matrix: Water

Analysis Batch: 201839

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 201411

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
o-Terphenyl	97		50 - 150

## Method: 6020 - Metals (ICP/MS)

Lab Sample ID: MB 580-201350/23-A

Matrix: Water

Analysis Batch: 201490

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 201350

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.010	mg/L		09/21/15 17:30	09/23/15 02:14	10	
Barium	ND		0.012	mg/L		09/21/15 17:30	09/23/15 02:14	10	
Cadmium	ND		0.0040	mg/L		09/21/15 17:30	09/23/15 02:14	10	
Chromium	ND		0.0040	mg/L		09/21/15 17:30	09/23/15 02:14	10	
Copper	ND		0.020	mg/L		09/21/15 17:30	09/23/15 02:14	10	
Lead	ND		0.0040	mg/L		09/21/15 17:30	09/23/15 02:14	10	
Manganese	ND		0.020	mg/L		09/21/15 17:30	09/23/15 02:14	10	
Selenium	ND		0.010	mg/L		09/21/15 17:30	09/23/15 02:14	10	
Silver	ND		0.0040	mg/L		09/21/15 17:30	09/23/15 02:14	10	
Zinc	ND		0.070	mg/L		09/21/15 17:30	09/23/15 02:14	10	

Lab Sample ID: LCS 580-201350/24-A

Matrix: Water

Analysis Batch: 201490

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 201350

Analyte	Spike Added	LCS		Unit	D	%Rec	%Rec.	
		Result	Qualifier				Limits	
Arsenic	4.00	4.03		mg/L	101	80 - 120		
Barium	4.00	4.13		mg/L	103	80 - 120		
Cadmium	0.100	0.102		mg/L	102	80 - 120		
Chromium	0.400	0.405		mg/L	101	80 - 120		
Copper	0.500	0.501		mg/L	100	80 - 120		
Lead	1.00	0.972		mg/L	97	80 - 120		
Manganese	1.00	1.01		mg/L	101	80 - 120		
Selenium	4.00	4.22		mg/L	106	80 - 120		
Silver	0.600	0.587		mg/L	98	80 - 120		
Zinc	4.00	3.99		mg/L	100	80 - 120		

Lab Sample ID: LCSD 580-201350/25-A

Matrix: Water

Analysis Batch: 201490

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 201350

Analyte	Spike Added	LCSD		Unit	D	%Rec	%Rec.		RPD
		Result	Qualifier				Limits	RPD	
Arsenic	4.00	4.01		mg/L	100	80 - 120		0	20
Barium	4.00	4.09		mg/L	102	80 - 120		1	20
Cadmium	0.100	0.101		mg/L	101	80 - 120		0	20
Chromium	0.400	0.399		mg/L	100	80 - 120		1	20
Copper	0.500	0.500		mg/L	100	80 - 120		0	20
Lead	1.00	0.975		mg/L	97	80 - 120		0	20
Manganese	1.00	1.01		mg/L	101	80 - 120		0	20

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53197-1

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: LCSD 580-201350/25-A**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 201350**

**%Rec.**

**RPD**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Selenium	4.00	4.19		mg/L		105	80 - 120	1	20
Silver	0.600	0.590		mg/L		98	80 - 120	0	20
Zinc	4.00	4.01		mg/L		100	80 - 120	0	20

**Lab Sample ID: 580-53155-D-2-C MS**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: Matrix Spike**

**Prep Type: Total/NA**

**Prep Batch: 201350**

**%Rec.**

**Limits**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Arsenic	ND		4.00	4.21		mg/L		105	80 - 120
Barium	0.063		4.00	4.41		mg/L		109	80 - 120
Cadmium	ND		0.100	0.105		mg/L		104	80 - 120
Chromium	ND		0.400	0.434		mg/L		108	80 - 120
Copper	ND		0.500	0.535		mg/L		105	80 - 120
Lead	ND		1.00	1.05		mg/L		104	80 - 120
Manganese	5.0		1.00	6.20	4	mg/L		120	80 - 120
Selenium	ND		4.00	4.44		mg/L		111	80 - 120
Silver	ND		0.600	0.608		mg/L		101	80 - 120
Zinc	ND		4.00	4.25		mg/L		105	80 - 120

**Lab Sample ID: 580-53155-D-2-D MSD**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total/NA**

**Prep Batch: 201350**

**%Rec.**

**RPD**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	ND		4.00	4.25		mg/L		106	80 - 120	1	20
Barium	0.063		4.00	4.42		mg/L		109	80 - 120	0	20
Cadmium	ND		0.100	0.115		mg/L		114	80 - 120	9	20
Chromium	ND		0.400	0.442		mg/L		110	80 - 120	2	20
Copper	ND		0.500	0.536		mg/L		105	80 - 120	0	20
Lead	ND		1.00	1.05		mg/L		105	80 - 120	1	20
Manganese	5.0		1.00	6.30	4	mg/L		129	80 - 120	2	20
Selenium	ND		4.00	4.45		mg/L		111	80 - 120	0	20
Silver	ND		0.600	0.620		mg/L		103	80 - 120	2	20
Zinc	ND		4.00	4.27		mg/L		106	80 - 120	1	20

**Lab Sample ID: 580-53155-D-2-B DU**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: Duplicate**

**Prep Type: Total/NA**

**Prep Batch: 201350**

**RPD**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Arsenic	ND		ND		mg/L		NC	20
Barium	0.063		0.0606		mg/L		4	20
Cadmium	ND		ND		mg/L		NC	20
Chromium	ND		ND		mg/L		NC	20
Copper	ND		ND		mg/L		NC	20
Lead	ND		ND		mg/L		NC	20
Manganese	5.0		4.95		mg/L		1	20
Selenium	ND		ND		mg/L		NC	20

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53197-1

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: 580-53155-D-2-B DU**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: Duplicate**

**Prep Type: Total/NA**

**Prep Batch: 201350**

**RPD**

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Silver	ND		ND		mg/L		NC	20
Zinc	ND		ND		mg/L		NC	20

**Lab Sample ID: MB 580-201379/20-A**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: Method Blank**

**Prep Type: Total Recoverable**

**Prep Batch: 201379**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Arsenic	ND		0.0010		mg/L		09/22/15 07:47	09/22/15 22:06	1
Barium	ND		0.0012		mg/L		09/22/15 07:47	09/22/15 22:06	1
Cadmium	ND		0.00040		mg/L		09/22/15 07:47	09/22/15 22:06	1
Chromium	ND		0.00040		mg/L		09/22/15 07:47	09/22/15 22:06	1
Copper	ND		0.0020		mg/L		09/22/15 07:47	09/22/15 22:06	1
Lead	ND		0.00040		mg/L		09/22/15 07:47	09/22/15 22:06	1
Manganese	ND		0.0020		mg/L		09/22/15 07:47	09/22/15 22:06	1
Selenium	ND		0.0010		mg/L		09/22/15 07:47	09/22/15 22:06	1
Silver	ND		0.00040		mg/L		09/22/15 07:47	09/22/15 22:06	1
Zinc	ND		0.0070		mg/L		09/22/15 07:47	09/22/15 22:06	1

**Lab Sample ID: LCS 580-201379/21-A**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total Recoverable**

**Prep Batch: 201379**

Analyte	Spike	LCS	LCS	%Rec.		
	Added	Result	Qualifier	Unit	D	%Rec
Arsenic	4.00	4.08		mg/L	102	80 - 120
Barium	4.00	4.25		mg/L	106	80 - 120
Cadmium	0.100	0.106		mg/L	106	80 - 120
Chromium	0.400	0.409		mg/L	102	80 - 120
Copper	0.500	0.517		mg/L	103	80 - 120
Lead	1.00	0.991		mg/L	99	80 - 120
Manganese	1.00	1.02		mg/L	102	80 - 120
Selenium	4.00	4.30		mg/L	107	80 - 120
Silver	0.600	0.598		mg/L	100	80 - 120
Zinc	4.00	4.07		mg/L	102	80 - 120

**Lab Sample ID: LCSD 580-201379/22-A**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total Recoverable**

**Prep Batch: 201379**

Analyte	Spike	LCSD	LCSD	%Rec.			RPD	Limit
	Added	Result	Qualifier	Unit	D	%Rec		
Arsenic	4.00	4.08		mg/L	102	80 - 120	0	20
Barium	4.00	4.25		mg/L	106	80 - 120	0	20
Cadmium	0.100	0.104		mg/L	104	80 - 120	2	20
Chromium	0.400	0.402		mg/L	100	80 - 120	2	20
Copper	0.500	0.511		mg/L	102	80 - 120	1	20
Lead	1.00	0.992		mg/L	99	80 - 120	0	20
Manganese	1.00	1.02		mg/L	102	80 - 120	0	20
Selenium	4.00	4.33		mg/L	108	80 - 120	1	20
Silver	0.600	0.593		mg/L	99	80 - 120	1	20

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53197-1

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: LCSD 580-201379/22-A**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total Recoverable**

**Prep Batch: 201379**

**%Rec.**

**RPD**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec.	RPD	Limit
Zinc	4.00	3.99		mg/L	100	80 - 120	2	20

**Lab Sample ID: 580-53334-A-4-C MS**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: Matrix Spike**

**Prep Type: Dissolved**

**Prep Batch: 201379**

**%Rec.**

**RPD**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec.	Limits	RPD	Limit
Arsenic	ND		4.00	4.52		mg/L	113	80 - 120			
Barium	ND		4.00	4.61		mg/L	115	80 - 120			
Cadmium	ND		0.100	0.113		mg/L	113	80 - 120			
Chromium	ND		0.400	0.455		mg/L	114	80 - 120			
Copper	ND		0.500	0.571		mg/L	114	80 - 120			
Lead	ND		1.00	1.11		mg/L	111	80 - 120			
Manganese	ND		1.00	1.15		mg/L	115	80 - 120			
Selenium	ND		4.00	4.75		mg/L	119	80 - 120			
Silver	ND		0.600	0.651		mg/L	108	80 - 120			
Zinc	ND		4.00	4.48		mg/L	112	80 - 120			

**Lab Sample ID: 580-53334-A-4-D MSD**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Dissolved**

**Prep Batch: 201379**

**%Rec.**

**RPD**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	Limits	RPD	Limit
Arsenic	ND		4.00	4.42		mg/L	111	80 - 120		2	20
Barium	ND		4.00	4.59		mg/L	115	80 - 120	0	20	
Cadmium	ND		0.100	0.114		mg/L	114	80 - 120	1	20	
Chromium	ND		0.400	0.449		mg/L	112	80 - 120	1	20	
Copper	ND		0.500	0.555		mg/L	111	80 - 120	3	20	
Lead	ND		1.00	1.09		mg/L	109	80 - 120	2	20	
Manganese	ND		1.00	1.14		mg/L	114	80 - 120	1	20	
Selenium	ND		4.00	4.64		mg/L	116	80 - 120	2	20	
Silver	ND		0.600	0.646		mg/L	108	80 - 120	1	20	
Zinc	ND		4.00	4.38		mg/L	110	80 - 120	2	20	

**Lab Sample ID: 580-53334-A-4-B DU**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: Duplicate**

**Prep Type: Dissolved**

**Prep Batch: 201379**

**RPD**

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D		RPD	Limit
Arsenic	ND			ND		mg/L		NC	20	
Barium	ND			ND		mg/L		NC	20	
Cadmium	ND			ND		mg/L		NC	20	
Chromium	ND			ND		mg/L		NC	20	
Copper	ND			ND		mg/L		NC	20	
Lead	ND			ND		mg/L		NC	20	
Manganese	ND			ND		mg/L		NC	20	
Selenium	ND			ND		mg/L		NC	20	
Silver	ND			ND		mg/L		NC	20	
Zinc	ND			ND		mg/L		NC	20	

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53197-1

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID:** MB 580-201610/20-A

**Matrix:** Water

**Analysis Batch:** 201690

**Client Sample ID:** Method Blank

**Prep Type:** Total/NA

**Prep Batch:** 201610

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	mg/L		09/24/15 10:49	09/24/15 14:55		1

**Lab Sample ID:** LCS 580-201610/21-A

**Matrix:** Water

**Analysis Batch:** 201690

**Client Sample ID:** Lab Control Sample

**Prep Type:** Total/NA

**Prep Batch:** 201610

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	Limits
Mercury	0.00200	0.00197		mg/L		98	80 - 120

**Lab Sample ID:** LCSD 580-201610/22-A

**Matrix:** Water

**Analysis Batch:** 201690

**Client Sample ID:** Lab Control Sample Dup

**Prep Type:** Total/NA

**Prep Batch:** 201610

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec.	RPD	Limit
Mercury	0.00200	0.00196		mg/L		98	80 - 120	0 20

**Lab Sample ID:** LCSSRM 580-201610/23-A

**Matrix:** Water

**Analysis Batch:** 201690

**Client Sample ID:** Lab Control Sample

**Prep Type:** Total/NA

**Prep Batch:** 201610

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec.	Limits
Mercury	0.00200	0.00193		mg/L		96	75 - 125

**Lab Sample ID:** 580-53336-J-4-C MS

**Matrix:** Water

**Analysis Batch:** 201690

**Client Sample ID:** Matrix Spike

**Prep Type:** Total/NA

**Prep Batch:** 201610

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec.	Limits
Mercury	ND		0.00200	0.00204		mg/L		102	80 - 120

**Lab Sample ID:** 580-53336-J-4-D MSD

**Matrix:** Water

**Analysis Batch:** 201690

**Client Sample ID:** Matrix Spike Duplicate

**Prep Type:** Total/NA

**Prep Batch:** 201610

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	RPD
Mercury	ND		0.00200	0.00210		mg/L		105	80 - 120 3 20

**Lab Sample ID:** 580-53336-J-4-B DU

**Matrix:** Water

**Analysis Batch:** 201690

**Client Sample ID:** Duplicate

**Prep Type:** Total/NA

**Prep Batch:** 201610

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Mercury	ND		ND		mg/L		NC	20

TestAmerica Seattle

# Lab Chronicle

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53197-1

**Client Sample ID: TRIP BLANKS**

Date Collected: 09/09/15 00:00

Date Received: 09/10/15 11:40

**Lab Sample ID: 580-53197-1**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	201253	09/19/15 19:43	K1K	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	201218	09/18/15 22:40	D1R	TAL SEA

**Client Sample ID: B-11-SC-CHEV**

Date Collected: 09/09/15 11:30

Date Received: 09/10/15 11:40

**Lab Sample ID: 580-53197-2**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	201253	09/19/15 21:31	K1K	TAL SEA
Total/NA	Prep	3520C			200834	09/15/15 16:36	ERZ	TAL SEA
Total/NA	Analysis	8270C SIM		1	201557	09/23/15 19:42	ERZ	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	201455	09/22/15 19:28	D1R	TAL SEA
Total/NA	Prep	3510C			201411	09/22/15 11:29	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	201839	09/29/15 00:32	KW	TAL SEA
Total/NA	Prep	3010A			201350	09/21/15 17:30	PAB	TAL SEA
Total/NA	Analysis	6020		10	201490	09/23/15 03:36	FCW	TAL SEA
Total/NA	Prep	7470A			201610	09/24/15 10:49	MKN	TAL SEA
Total/NA	Analysis	7470A		1	201690	09/24/15 15:42	FCW	TAL SEA

**Client Sample ID: CR-29B-SC-CHEV**

Date Collected: 09/09/15 14:20

Date Received: 09/10/15 11:40

**Lab Sample ID: 580-53197-3**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	201253	09/19/15 21:58	K1K	TAL SEA
Total/NA	Prep	3520C			200834	09/15/15 16:36	ERZ	TAL SEA
Total/NA	Analysis	8270C SIM		1	201557	09/23/15 20:14	ERZ	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	201455	09/22/15 18:56	D1R	TAL SEA
Total/NA	Prep	3510C			201411	09/22/15 11:29	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	201839	09/29/15 00:50	KW	TAL SEA
Dissolved	Prep	3005A			201379	09/22/15 07:47	MKN	TAL SEA
Dissolved	Analysis	6020		5	201490	09/22/15 23:15	FCW	TAL SEA
Total/NA	Prep	3010A			201350	09/21/15 17:30	PAB	TAL SEA
Total/NA	Analysis	6020		10	201490	09/23/15 03:41	FCW	TAL SEA
Dissolved	Prep	7470A			201610	09/24/15 10:49	MKN	TAL SEA
Dissolved	Analysis	7470A		1	201690	09/24/15 15:37	FCW	TAL SEA
Total/NA	Prep	7470A			201610	09/24/15 10:49	MKN	TAL SEA
Total/NA	Analysis	7470A		1	201690	09/24/15 15:44	FCW	TAL SEA

TestAmerica Seattle

# Lab Chronicle

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53197-1

**Client Sample ID: B-26-SC-CHEV**

**Date Collected: 09/09/15 16:35**

**Date Received: 09/10/15 11:40**

**Lab Sample ID: 580-53197-4**

**Matrix: Water**

Prep Type	Batch	Batch	Run	Dilution	Batch	Prepared		Lab
	Type	Method		Factor	Number	or Analyzed	Analyst	
Total/NA	Analysis	8260B		1	201253	09/19/15 22:24	K1K	TAL SEA
Total/NA	Prep	3520C			200834	09/15/15 16:36	ERZ	TAL SEA
Total/NA	Analysis	8270C SIM		1	201557	09/23/15 20:47	ERZ	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	201455	09/22/15 20:35	D1R	TAL SEA
Total/NA	Prep	3510C			201411	09/22/15 11:29	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	203052	10/12/15 10:50	NMI	TAL SEA
Total/NA	Prep	3010A			201350	09/21/15 17:30	PAB	TAL SEA
Total/NA	Analysis	6020		10	201490	09/23/15 03:59	FCW	TAL SEA
Total/NA	Prep	7470A			201610	09/24/15 10:49	MKN	TAL SEA
Total/NA	Analysis	7470A		1	201690	09/24/15 15:40	FCW	TAL SEA

**Laboratory References:**

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

## Certification Summary

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53197-1

### Laboratory: TestAmerica Seattle

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-022	03-02-16
California	State Program	9	2901	01-31-17
L-A-B	DoD ELAP		L2236	01-19-16
L-A-B	ISO/IEC 17025		L2236	01-19-16
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-06-15
US Fish & Wildlife	Federal		LE058448-0	02-28-16
USDA	Federal		P330-14-00126	04-08-17
Washington	State Program	10	C553	02-17-16

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TestAmerica Seattle

## Sample Summary

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.00

TestAmerica Job ID: 580-53197-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-53197-1	TRIP BLANKS	Water	09/09/15 00:00	09/10/15 11:40
580-53197-2	B-11-SC-CHEV	Water	09/09/15 11:30	09/10/15 11:40
580-53197-3	CR-29B-SC-CHEV	Water	09/09/15 14:20	09/10/15 11:40
580-53197-4	B-26-SC-CHEV	Water	09/09/15 16:35	09/10/15 11:40

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TestAmerica Seattle

**TestAmerica Portland**  
24 - 11 Ninety Avenue



## **Chain of Custody Record**

**Beaverton, OR 97006**  
**Phone: 503.296.9200 Fax:**

580-53197 Chain of Custody

090109

Tech America

THE LEADER IN ENVIRONMENTAL TESTING  
**TestAmerica Laboratories, Inc.**

TAL-8210 (0713)

Client Contact		Project Manager <u>JENNIE FENLEY</u>	Site Contact <u>BRIAN FERNANDEZ</u>	Date: <u>09/10/15</u>	COC No:
Company Name: <u>ACADIS</u>		Tel/Fax: <u>503.220.8201 x 114</u>	Lab Contact: <u>SARAH MURPHY</u>	Carrier:	<u>1</u> of <u>1</u> COCs
Address: <u>11 SW COLUMBIA ST STE 670</u>		Analysis Turnaround Time			
City/State/Zip: <u>VANCOUVER, OR 97219</u>		<input type="checkbox"/> CALENDAR DAYS	<input type="checkbox"/> WORKING DAYS		
Phone: <u>503.220.8201</u>		TAT if different from Below			
Fax:		<input checked="" type="checkbox"/>	2 weeks		
Project Name: <u>302015 WILBURIDGE EWM</u>		<input type="checkbox"/>	1 week		
Site: <u>1001808</u>		<input type="checkbox"/>	2 days		
P O # <u>302015.0012.00120.BF</u> <u>30045452.0013.00420</u>		<input type="checkbox"/>	1 day		
Sample Identification					
Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N)
—	—	—	W	2	X X
9/9/15 11:30		G	W	10	X X X X X
9/9/15 14:20		G	W	11	X X X X X X
9/9/15 16:35		G	W	10	X + + X X
9/9/15 15:10		G	W	12	X X X X X X
Sample Specific Notes:  <u>TRIP BLANKS</u> <u>B-11-SC-CHEV</u> <u>CR-29B-SC-CHEV</u> <u>B-26-SC-CHEV</u> <u>B-10-PI-CHEV</u>  <u>DISC. METALS</u> <u>FIELD FILTERED</u> <u>BF</u>					
Preservation Used: 1=Ice, 2=HCl, 3=H <sub>2</sub> SO <sub>4</sub> , 4=HNO <sub>3</sub> , 5=NaOH, 6=Other					
Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.					
Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)					
<input checked="" type="checkbox"/> Non-Hazard			<input type="checkbox"/> Return to Client		
<input type="checkbox"/> Flammable			<input checked="" type="checkbox"/> Disposal by Lab		
<input type="checkbox"/> Skin Irritant			<input type="checkbox"/> Archive for _____ Months		
<input type="checkbox"/> Poison B					
<input type="checkbox"/> Unknown					

Preservation Used: 1- Ice, 2- HCl, 3- H<sub>2</sub>SO<sub>4</sub>, 4- HNO<sub>3</sub>, 5- NaOH, 6- Other

**Possible Hazard Identification:**

Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

Non-Hazard       Flammable       Skin Irritant       Poison B       Unknown

**Sample Disposal** ( A fee may be assessed if samples are retained longer than 1 month)

Return to Client       Disposal by Lab       Archive for \_\_\_\_\_ Months

**Special Instructions/QC Requirements & Comments:**

~~PLEASE SEND REPORT TO: BRIAN.FIENISTER@AMANDIS-US.COM AND BRIAN.MARTINA@AMANDIS-US.COM~~

BRIAN MARCUS ARCADIS  
115.COM

Custody Seals Intact:  Yes  No      Custody Seal No.: \_\_\_\_\_      Cooler Temp. (°C): Obs'd: \_\_\_\_\_

Custody Seals Intact:  Yes  No      Custody Seal No.: \_\_\_\_\_      Cooler Temp. (°C): Obs'd: \_\_\_\_\_ Corr'd: \_\_\_\_\_ Therm ID No.: \_\_\_\_\_

Custody Seals Intact:  Yes  No      Custody Seal No.: \_\_\_\_\_      Cooler Temp. (°C): Obs'd: \_\_\_\_\_ Corr'd: \_\_\_\_\_ Therm ID No.: \_\_\_\_\_  
 Relinquished by: *M. J. Courtney*      Company: *AT&T Inc.*      Date/Time: *26-15 1028*      Received by: *John M.*      Company: *ME*      Date/Time: *9-15 1028*

Custody Seals Intact: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	Custody Seal No.:	Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ Therm ID No.: _____			
Relinquished by: <i>Mrs. Amatya</i>	Company: <b>ARCADIS</b>	Date/Time: <b>9/10/15 10:38</b>	Received by: <i>Janice M.</i>	Company: <b>M.E.</b>	Date/Time: <b>9/10/15 10:38</b>
<i>Reinforced by</i>	Company: <b>ARCADIS</b>	Date/Time: <b>9/10/15 10:38</b>	Received by: <i>Janice M.</i>	Company: <b>M.E.</b>	Date/Time: <b>9/10/15 10:38</b>

Relinquished by: \_\_\_\_\_ Company: \_\_\_\_\_ Date/Time: \_\_\_\_\_ Received in Laboratory by: \_\_\_\_\_ Company: \_\_\_\_\_ Date/Time: \_\_\_\_\_

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## Login Sample Receipt Checklist

Client: ARCADIS U.S. Inc

Job Number: 580-53197-1

**Login Number: 53197**

**List Source: TestAmerica Seattle**

**List Number: 1**

**Creator: Gonzales, Steve**

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Seattle

5755 8th Street East

Tacoma, WA 98424

Tel: (253)922-2310

TestAmerica Job ID: 580-53243-1

Client Project/Site: 3Q2015 Willbridge GWM  
B0045452.0018.0042

For:

ARCADIS U.S. Inc  
111 SW Columbia Street  
Suite 670  
Portland, Oregon 97201

Attn: Brian Marcum

Sarah Murphy

Authorized for release by:

10/30/2015 1:30:34 PM

Sarah Murphy, Project Manager I

(253)922-2310

[sarah.murphy@testamericainc.com](mailto:sarah.murphy@testamericainc.com)

### LINKS

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results through

Total Access

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Ask  
The  
Expert

Visit us at:

[www.testamericainc.com](http://www.testamericainc.com)

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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# Case Narrative

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53243-1

## Job ID: 580-53243-1

### Laboratory: TestAmerica Seattle

#### Narrative

#### Job Narrative 580-53243-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 9/11/2015 2:10 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 0.9° C, 1.4° C, 2.0° C, 3.0° C and 3.7° C.

#### Receipt Exceptions

No analyses checked off on COC for trip blank: Trip Blank (580-53243-3).

#### GC/MS VOA

Method(s) 8260B: The surrogate recovery for the blank associated with batch 201735 was outside the upper control limits. All associated sample surrogates fell within acceptance criteria; therefore, the data have been reported.

8260 analysis was canceled for sample 580-53243-3 (Trip Blank) as there was only enough volume remaining for NWTPH-Gx.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### GC/MS Semi VOA

Method(s) 8270C SIM: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch (LCSD 580-201093/3-A) recovered outside control limits for the following analytes: Benzo[g,h,i]perylene and Benzo[a]pyrene.

Method(s) 8270C SIM: The following analyte recovered outside control limits for the LCS/LCSD associated with preparation batch 580-201093 and analytical batch 580-202181: Anthracene (both LCSD and LCSD), Benzo[a]pyrene (both LCS and LCSD), and Benzo[g,h,i]perylene(LCSD only). These analytes were outside the Marginal Exceedance Limits and were indicative of a systematic problem; therefore, re-extraction and/or re-analysis was performed. The re-extraction yielded improved results, however it was out of hold. Therefore, both sets of data have been qualified and reported: CR-31B-SC-CHEV (580-53243-1), CR-31A-SC-CHEV (580-53243-2) and CR-30A-SC-CHEV (580-53243-4).

Method(s) 8270C SIM: The following samples were diluted to bring the concentration of target analytes within the calibration range: CR-31A-SC-CHEV (580-53243-2) and CR-30A-SC-CHEV (580-53243-4) at 10.0 and 10.0. Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### GC Semi VOA

Method(s) NWTPH-Dx: The Diesel Range Organics (DRO) #2 Diesel (C10-C24) and Motor Oil (>C24-C36) concentration reported for the following samples is due to the presence of discrete peaks: CR-31B-SC-CHEV (580-53243-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Organic Prep

Method(s) 3520C: There was only approx. 500 mL of sample volume available in the 1-L amber bottle of sample CR-31B-SC-CHEV (580-53243-1). This extraction requires 1-L of sample to achieve the method reporting limits.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Definitions/Glossary

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53243-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits

### GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
*	RPD of the LCS and LCSD exceeds the control limits
H	Sample was prepped or analyzed beyond the specified holding time
X	Surrogate is outside control limits

### Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

## Glossary

### Abbreviation

**These commonly used abbreviations may or may not be present in this report.**

□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

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# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53243-1

**Client Sample ID: CR-31B-SC-CHEV**

**Lab Sample ID: 580-53243-1**

**Matrix: Water**

Date Collected: 09/11/15 09:30

Date Received: 09/11/15 14:10

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			09/25/15 15:48	1
Ethylbenzene	ND		3.0		ug/L			09/25/15 15:48	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/25/15 15:48	1
m-Xylene & p-Xylene	ND		3.0		ug/L			09/25/15 15:48	1
o-Xylene	ND		2.0		ug/L			09/25/15 15:48	1
Toluene	ND		2.0		ug/L			09/25/15 15:48	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	106			75 - 120				09/25/15 15:48	1
Dibromofluoromethane (Surr)	108			85 - 115				09/25/15 15:48	1
1,2-Dichloroethane-d4 (Surr)	109			70 - 120				09/25/15 15:48	1
Toluene-d8 (Surr)	108			85 - 120				09/25/15 15:48	1
Trifluorotoluene (Surr)	98			70 - 136				09/25/15 15:48	1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.017		ug/L		09/17/15 17:01	09/30/15 21:17	1
2-Methylnaphthalene	ND		0.023		ug/L		09/17/15 17:01	09/30/15 21:17	1
1-Methylnaphthalene	ND		0.017		ug/L		09/17/15 17:01	09/30/15 21:17	1
Acenaphthylene	ND		0.017		ug/L		09/17/15 17:01	09/30/15 21:17	1
Acenaphthene	ND		0.017		ug/L		09/17/15 17:01	09/30/15 21:17	1
<b>Fluorene</b>	<b>0.018</b>		0.017		ug/L		09/17/15 17:01	09/30/15 21:17	1
Phenanthrene	ND		0.17		ug/L		09/17/15 17:01	09/30/15 21:17	1
Anthracene	ND *		0.044		ug/L		09/17/15 17:01	09/30/15 21:17	1
Fluoranthene	ND		0.087		ug/L		09/17/15 17:01	09/30/15 21:17	1
Pyrene	ND		0.087		ug/L		09/17/15 17:01	09/30/15 21:17	1
Benzo[a]anthracene	ND		0.017		ug/L		09/17/15 17:01	09/30/15 21:17	1
Chrysene	ND		0.017		ug/L		09/17/15 17:01	09/30/15 21:17	1
Benzo[a]pyrene	ND *		0.017		ug/L		09/17/15 17:01	09/30/15 21:17	1
Indeno[1,2,3-cd]pyrene	ND		0.017		ug/L		09/17/15 17:01	09/30/15 21:17	1
Dibenz(a,h)anthracene	ND		0.017		ug/L		09/17/15 17:01	09/30/15 21:17	1
Benzo[g,h,i]perylene	ND *		0.017		ug/L		09/17/15 17:01	09/30/15 21:17	1
Benzo[b]fluoranthene	ND		0.017		ug/L		09/17/15 17:01	09/30/15 21:17	1
Benzo[k]fluoranthene	ND		0.017		ug/L		09/17/15 17:01	09/30/15 21:17	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Terphenyl-d14	85			64 - 150				09/17/15 17:01	09/30/15 21:17

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND H		0.095		ug/L		10/10/15 11:07	10/23/15 15:22	10
2-Methylnaphthalene	ND H		0.12		ug/L		10/10/15 11:07	10/23/15 15:22	10
1-Methylnaphthalene	ND H		0.095		ug/L		10/10/15 11:07	10/23/15 15:22	10
Acenaphthylene	ND H		0.095		ug/L		10/10/15 11:07	10/23/15 15:22	10
Acenaphthene	ND H		0.095		ug/L		10/10/15 11:07	10/23/15 15:22	10
Fluorene	ND H		0.095		ug/L		10/10/15 11:07	10/23/15 15:22	10
Phenanthrene	ND H		0.95		ug/L		10/10/15 11:07	10/23/15 15:22	10
Anthracene	ND H		0.24		ug/L		10/10/15 11:07	10/23/15 15:22	10
Fluoranthene	ND H		0.47		ug/L		10/10/15 11:07	10/23/15 15:22	10
Pyrene	ND H		0.47		ug/L		10/10/15 11:07	10/23/15 15:22	10

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53243-1

## Client Sample ID: CR-31B-SC-CHEV

Date Collected: 09/11/15 09:30

Date Received: 09/11/15 14:10

## Lab Sample ID: 580-53243-1

Matrix: Water

### Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) - RE (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND	H	0.095		ug/L		10/10/15 11:07	10/23/15 15:22	10
Chrysene	ND	H	0.095		ug/L		10/10/15 11:07	10/23/15 15:22	10
Benzo[a]pyrene	ND	H	0.095		ug/L		10/10/15 11:07	10/23/15 15:22	10
Indeno[1,2,3-cd]pyrene	ND	H	0.095		ug/L		10/10/15 11:07	10/23/15 15:22	10
Dibenz(a,h)anthracene	ND	H	0.095		ug/L		10/10/15 11:07	10/23/15 15:22	10
Benzo[g,h,i]perylene	ND	H	0.095		ug/L		10/10/15 11:07	10/23/15 15:22	10
Benzo[b]fluoranthene	ND	H	0.095		ug/L		10/10/15 11:07	10/23/15 15:22	10
Benzo[k]fluoranthene	ND	H	0.095		ug/L		10/10/15 11:07	10/23/15 15:22	10
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Terphenyl-d14	50	X	64 - 150				10/10/15 11:07	10/23/15 15:22	10

### Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050		mg/L			09/21/15 05:51	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	91		50 - 150					09/21/15 05:51	1
Trifluorotoluene (Surr)	102		50 - 150					09/21/15 05:51	1

### Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.43		0.12		mg/L		09/22/15 11:29	10/12/15 12:42	1
Motor Oil (>C24-C36)	ND		0.27		mg/L		09/22/15 11:29	10/12/15 12:42	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
o-Terphenyl	80		50 - 150				09/22/15 11:29	10/12/15 12:42	1

### Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.13		0.010		mg/L		09/21/15 17:30	09/23/15 04:26	10
Barium	0.19		0.012		mg/L		09/21/15 17:30	09/23/15 04:26	10
Cadmium	ND		0.0040		mg/L		09/21/15 17:30	09/23/15 04:26	10
Chromium	0.012		0.0040		mg/L		09/21/15 17:30	09/23/15 04:26	10
Copper	ND		0.020		mg/L		09/21/15 17:30	09/23/15 04:26	10
Lead	0.0074		0.0040		mg/L		09/21/15 17:30	09/23/15 04:26	10
Manganese	12		0.020		mg/L		09/21/15 17:30	09/23/15 04:26	10
Selenium	ND		0.010		mg/L		09/21/15 17:30	09/23/15 04:26	10
Silver	ND		0.0040		mg/L		09/21/15 17:30	09/23/15 04:26	10
Zinc	ND		0.070		mg/L		09/21/15 17:30	09/23/15 04:26	10

### Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.14		0.0050		mg/L		09/22/15 09:37	09/23/15 01:33	5
Barium	0.13		0.0060		mg/L		09/22/15 09:37	09/23/15 01:33	5
Cadmium	ND		0.0020		mg/L		09/22/15 09:37	09/23/15 01:33	5
Chromium	ND		0.0020		mg/L		09/22/15 09:37	09/23/15 01:33	5
Copper	ND		0.010		mg/L		09/22/15 09:37	09/23/15 01:33	5
Lead	ND		0.0020		mg/L		09/22/15 09:37	09/23/15 01:33	5
Manganese	12		0.010		mg/L		09/22/15 09:37	09/23/15 01:33	5
Selenium	ND		0.0050		mg/L		09/22/15 09:37	09/23/15 01:33	5

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53243-1

**Client Sample ID: CR-31B-SC-CHEV**

Date Collected: 09/11/15 09:30

Date Received: 09/11/15 14:10

**Lab Sample ID: 580-53243-1**

Matrix: Water

## Method: 6020 - Metals (ICP/MS) - Dissolved (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Silver	ND		0.0020	mg/L		09/22/15 09:37	09/23/15 01:33		5
Zinc	ND		0.035	mg/L		09/22/15 09:37	09/23/15 01:33		5

## Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	mg/L		09/29/15 06:53	09/29/15 12:13		1

## Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020	mg/L		09/29/15 06:53	09/29/15 12:15		1

1

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TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53243-1

**Client Sample ID: CR-31A-SC-CHEV**

**Lab Sample ID: 580-53243-2**

**Matrix: Water**

Date Collected: 09/11/15 08:50

Date Received: 09/11/15 14:10

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			09/25/15 16:18	1
Ethylbenzene	ND		3.0		ug/L			09/25/15 16:18	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/25/15 16:18	1
m-Xylene & p-Xylene	ND		3.0		ug/L			09/25/15 16:18	1
o-Xylene	ND		2.0		ug/L			09/25/15 16:18	1
Toluene	ND		2.0		ug/L			09/25/15 16:18	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		75 - 120		09/25/15 16:18	1
Dibromofluoromethane (Surr)	105		85 - 115		09/25/15 16:18	1
1,2-Dichloroethane-d4 (Surr)	118		70 - 120		09/25/15 16:18	1
Toluene-d8 (Surr)	102		85 - 120		09/25/15 16:18	1
Trifluorotoluene (Surr)	100		70 - 136		09/25/15 16:18	1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	0.33		0.0095		ug/L		09/17/15 17:01	09/30/15 21:40	1
2-Methylnaphthalene	ND		0.012		ug/L		09/17/15 17:01	09/30/15 21:40	1
1-Methylnaphthalene	ND		0.0095		ug/L		09/17/15 17:01	09/30/15 21:40	1
Phenanthrene	0.99		0.095		ug/L		09/17/15 17:01	09/30/15 21:40	1
Anthracene	0.15 *		0.024		ug/L		09/17/15 17:01	09/30/15 21:40	1
Fluoranthene	0.075		0.048		ug/L		09/17/15 17:01	09/30/15 21:40	1
Pyrene	0.080		0.048		ug/L		09/17/15 17:01	09/30/15 21:40	1
Benzo[a]anthracene	ND		0.0095		ug/L		09/17/15 17:01	09/30/15 21:40	1
Chrysene	ND		0.0095		ug/L		09/17/15 17:01	09/30/15 21:40	1
Benzo[a]pyrene	ND *		0.0095		ug/L		09/17/15 17:01	09/30/15 21:40	1
Indeno[1,2,3-cd]pyrene	ND		0.0095		ug/L		09/17/15 17:01	09/30/15 21:40	1
Dibenz(a,h)anthracene	ND		0.0095		ug/L		09/17/15 17:01	09/30/15 21:40	1
Benzo[g,h,i]perylene	ND *		0.0095		ug/L		09/17/15 17:01	09/30/15 21:40	1
Benzo[b]fluoranthene	ND		0.0095		ug/L		09/17/15 17:01	09/30/15 21:40	1
Benzo[k]fluoranthene	ND		0.0095		ug/L		09/17/15 17:01	09/30/15 21:40	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	83		64 - 150		09/17/15 17:01	09/30/15 21:40

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	0.35		0.095		ug/L		09/17/15 17:01	10/24/15 16:41	10
Acenaphthene	1.3		0.095		ug/L		09/17/15 17:01	10/24/15 16:41	10
Fluorene	5.3		0.095		ug/L		09/17/15 17:01	10/24/15 16:41	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	86		64 - 150		09/17/15 17:01	10/24/15 16:41

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND H		0.75		ug/L		10/10/15 11:07	10/23/15 15:45	50
2-Methylnaphthalene	ND H		0.98		ug/L		10/10/15 11:07	10/23/15 15:45	50
1-Methylnaphthalene	ND H		0.75		ug/L		10/10/15 11:07	10/23/15 15:45	50
Acenaphthylene	ND H		0.75		ug/L		10/10/15 11:07	10/23/15 15:45	50
Acenaphthene	ND H		0.75		ug/L		10/10/15 11:07	10/23/15 15:45	50

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53243-1

## Client Sample ID: CR-31A-SC-CHEV

Date Collected: 09/11/15 08:50

Date Received: 09/11/15 14:10

## Lab Sample ID: 580-53243-2

Matrix: Water

### Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) - RE (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	ND	H	0.75		ug/L		10/10/15 11:07	10/23/15 15:45	50
Phenanthrene	ND	H	7.5		ug/L		10/10/15 11:07	10/23/15 15:45	50
Anthracene	ND	H	1.9		ug/L		10/10/15 11:07	10/23/15 15:45	50
Fluoranthene	ND	H	3.8		ug/L		10/10/15 11:07	10/23/15 15:45	50
Pyrene	ND	H	3.8		ug/L		10/10/15 11:07	10/23/15 15:45	50
Benzo[a]anthracene	ND	H	0.75		ug/L		10/10/15 11:07	10/23/15 15:45	50
Chrysene	ND	H	0.75		ug/L		10/10/15 11:07	10/23/15 15:45	50
Benzo[a]pyrene	ND	H	0.75		ug/L		10/10/15 11:07	10/23/15 15:45	50
Indeno[1,2,3-cd]pyrene	ND	H	0.75		ug/L		10/10/15 11:07	10/23/15 15:45	50
Dibenz(a,h)anthracene	ND	H	0.75		ug/L		10/10/15 11:07	10/23/15 15:45	50
Benzo[g,h,i]perylene	ND	H	0.75		ug/L		10/10/15 11:07	10/23/15 15:45	50
Benzo[b]fluoranthene	ND	H	0.75		ug/L		10/10/15 11:07	10/23/15 15:45	50
Benzo[k]fluoranthene	ND	H	0.75		ug/L		10/10/15 11:07	10/23/15 15:45	50
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Terphenyl-d14	84		64 - 150				10/10/15 11:07	10/23/15 15:45	50

### Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	0.81		0.050		mg/L			09/21/15 06:24	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	101		50 - 150					09/21/15 06:24	1
Trifluorotoluene (Surr)	104		50 - 150					09/21/15 06:24	1

### Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	6.6		0.12		mg/L		09/22/15 11:29	09/23/15 21:05	1
Motor Oil (>C24-C36)	2.7		0.27		mg/L		09/22/15 11:29	09/23/15 21:05	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
o-Terphenyl	114		50 - 150				09/22/15 11:29	09/23/15 21:05	1

### Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.011		0.010		mg/L		09/21/15 17:30	09/23/15 04:31	10
Barium	0.071		0.012		mg/L		09/21/15 17:30	09/23/15 04:31	10
Cadmium	ND		0.0040		mg/L		09/21/15 17:30	09/23/15 04:31	10
Chromium	0.0066		0.0040		mg/L		09/21/15 17:30	09/23/15 04:31	10
Copper	ND		0.020		mg/L		09/21/15 17:30	09/23/15 04:31	10
Lead	ND		0.0040		mg/L		09/21/15 17:30	09/23/15 04:31	10
Manganese	1.5		0.020		mg/L		09/21/15 17:30	09/23/15 04:31	10
Selenium	ND		0.010		mg/L		09/21/15 17:30	09/23/15 04:31	10
Silver	ND		0.0040		mg/L		09/21/15 17:30	09/23/15 04:31	10
Zinc	ND		0.070		mg/L		09/21/15 17:30	09/23/15 04:31	10

### Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.014		0.0050		mg/L		09/22/15 09:37	09/23/15 01:37	5
Barium	0.047		0.0060		mg/L		09/22/15 09:37	09/23/15 01:37	5
Cadmium	ND		0.0020		mg/L		09/22/15 09:37	09/23/15 01:37	5

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53243-1

**Client Sample ID: CR-31A-SC-CHEV**

Date Collected: 09/11/15 08:50

Date Received: 09/11/15 14:10

**Lab Sample ID: 580-53243-2**

Matrix: Water

**Method: 6020 - Metals (ICP/MS) - Dissolved (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	ND		0.0020		mg/L		09/22/15 09:37	09/23/15 01:37	5
Copper	ND		0.010		mg/L		09/22/15 09:37	09/23/15 01:37	5
Lead	ND		0.0020		mg/L		09/22/15 09:37	09/23/15 01:37	5
Manganese	1.9		0.010		mg/L		09/22/15 09:37	09/23/15 01:37	5
Selenium	ND		0.0050		mg/L		09/22/15 09:37	09/23/15 01:37	5
Silver	ND		0.0020		mg/L		09/22/15 09:37	09/23/15 01:37	5
Zinc	ND		0.035		mg/L		09/22/15 09:37	09/23/15 01:37	5

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		09/29/15 06:53	09/29/15 11:43	1

**Method: 7470A - Mercury (CVAA) - Dissolved**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		09/29/15 06:53	09/29/15 11:36	1

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53243-1

**Client Sample ID: Trip Blank**

Date Collected: 09/11/15 00:00

Date Received: 09/11/15 14:10

**Lab Sample ID: 580-53243-3**

Matrix: Water

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050		mg/L			09/20/15 19:56	1
<b>Surrogate</b>									
	%Recovery	Qualifier		Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91			50 - 150				09/20/15 19:56	1
Trifluorotoluene (Surr)	110			50 - 150				09/20/15 19:56	1

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53243-1

**Client Sample ID: CR-30A-SC-CHEV**

**Lab Sample ID: 580-53243-4**

**Matrix: Water**

Date Collected: 09/11/15 11:10

Date Received: 09/11/15 14:10

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			09/25/15 16:46	1
Ethylbenzene	ND		3.0		ug/L			09/25/15 16:46	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/25/15 16:46	1
m-Xylene & p-Xylene	ND		3.0		ug/L			09/25/15 16:46	1
o-Xylene	ND		2.0		ug/L			09/25/15 16:46	1
Toluene	ND		2.0		ug/L			09/25/15 16:46	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	105			75 - 120				09/25/15 16:46	1
Dibromofluoromethane (Surr)	108			85 - 115				09/25/15 16:46	1
1,2-Dichloroethane-d4 (Surr)	106			70 - 120				09/25/15 16:46	1
Toluene-d8 (Surr)	105			85 - 120				09/25/15 16:46	1
Trifluorotoluene (Surr)	103			70 - 136				09/25/15 16:46	1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	0.32			0.0095	ug/L		09/17/15 17:01	09/30/15 22:04	1
2-Methylnaphthalene	ND		0.012		ug/L		09/17/15 17:01	09/30/15 22:04	1
1-Methylnaphthalene	0.26			0.0095	ug/L		09/17/15 17:01	09/30/15 22:04	1
Phenanthrene	0.80			0.095	ug/L		09/17/15 17:01	09/30/15 22:04	1
Anthracene	0.030 *		0.024		ug/L		09/17/15 17:01	09/30/15 22:04	1
Fluoranthene	ND		0.047		ug/L		09/17/15 17:01	09/30/15 22:04	1
Pyrene	0.047			0.047	ug/L		09/17/15 17:01	09/30/15 22:04	1
Benzo[a]pyrene	ND *		0.0095		ug/L		09/17/15 17:01	09/30/15 22:04	1
Indeno[1,2,3-cd]pyrene	ND		0.0095		ug/L		09/17/15 17:01	09/30/15 22:04	1
Dibenz(a,h)anthracene	ND		0.0095		ug/L		09/17/15 17:01	09/30/15 22:04	1
Benzo[g,h,i]perylene	ND *		0.0095		ug/L		09/17/15 17:01	09/30/15 22:04	1
Benzo[b]fluoranthene	ND		0.0095		ug/L		09/17/15 17:01	09/30/15 22:04	1
Benzo[k]fluoranthene	ND		0.0095		ug/L		09/17/15 17:01	09/30/15 22:04	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Terphenyl-d14	82			64 - 150			09/17/15 17:01	09/30/15 22:04	1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	0.16			0.095	ug/L		09/17/15 17:01	10/24/15 17:04	10
Acenaphthene	0.73			0.095	ug/L		09/17/15 17:01	10/24/15 17:04	10
Fluorene	1.3			0.095	ug/L		09/17/15 17:01	10/24/15 17:04	10
Benzo[a]anthracene	ND		0.095		ug/L		09/17/15 17:01	10/24/15 17:04	10
Chrysene	ND		0.095		ug/L		09/17/15 17:01	10/24/15 17:04	10
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Terphenyl-d14	80			64 - 150			09/17/15 17:01	10/24/15 17:04	10

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND H		0.15		ug/L		10/10/15 11:07	10/23/15 16:08	10
2-Methylnaphthalene	ND H		0.19		ug/L		10/10/15 11:07	10/23/15 16:08	10
1-Methylnaphthalene	ND H		0.15		ug/L		10/10/15 11:07	10/23/15 16:08	10
Acenaphthylene	ND H		0.15		ug/L		10/10/15 11:07	10/23/15 16:08	10
Acenaphthene	ND H		0.15		ug/L		10/10/15 11:07	10/23/15 16:08	10

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53243-1

## Client Sample ID: CR-30A-SC-CHEV

Date Collected: 09/11/15 11:10

Date Received: 09/11/15 14:10

## Lab Sample ID: 580-53243-4

Matrix: Water

### Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) - RE (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	ND	H	0.15		ug/L		10/10/15 11:07	10/23/15 16:08	10
Phenanthrene	ND	H	1.5		ug/L		10/10/15 11:07	10/23/15 16:08	10
Anthracene	ND	H	0.37		ug/L		10/10/15 11:07	10/23/15 16:08	10
Fluoranthene	ND	H	0.74		ug/L		10/10/15 11:07	10/23/15 16:08	10
Pyrene	ND	H	0.74		ug/L		10/10/15 11:07	10/23/15 16:08	10
Benzo[a]anthracene	ND	H	0.15		ug/L		10/10/15 11:07	10/23/15 16:08	10
Chrysene	ND	H	0.15		ug/L		10/10/15 11:07	10/23/15 16:08	10
Benzo[a]pyrene	ND	H	0.15		ug/L		10/10/15 11:07	10/23/15 16:08	10
Indeno[1,2,3-cd]pyrene	ND	H	0.15		ug/L		10/10/15 11:07	10/23/15 16:08	10
Dibenz(a,h)anthracene	ND	H	0.15		ug/L		10/10/15 11:07	10/23/15 16:08	10
Benzo[g,h,i]perylene	ND	H	0.15		ug/L		10/10/15 11:07	10/23/15 16:08	10
Benzo[b]fluoranthene	ND	H	0.15		ug/L		10/10/15 11:07	10/23/15 16:08	10
Benzo[k]fluoranthene	ND	H	0.15		ug/L		10/10/15 11:07	10/23/15 16:08	10
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Terphenyl-d14	80		64 - 150				10/10/15 11:07	10/23/15 16:08	10

### Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	0.48		0.050		mg/L			09/21/15 06:58	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	106		50 - 150					09/21/15 06:58	1
Trifluorotoluene (Surr)	108		50 - 150					09/21/15 06:58	1

### Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	1.2		0.11		mg/L		09/22/15 11:29	09/23/15 21:23	1
Motor Oil (>C24-C36)	0.45		0.26		mg/L		09/22/15 11:29	09/23/15 21:23	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
o-Terphenyl	91		50 - 150				09/22/15 11:29	09/23/15 21:23	1

### Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.021		0.010		mg/L		09/21/15 17:30	09/23/15 04:35	10
Barium	0.054		0.012		mg/L		09/21/15 17:30	09/23/15 04:35	10
Cadmium	ND		0.0040		mg/L		09/21/15 17:30	09/23/15 04:35	10
Chromium	ND		0.0040		mg/L		09/21/15 17:30	09/23/15 04:35	10
Copper	ND		0.020		mg/L		09/21/15 17:30	09/23/15 04:35	10
Lead	ND		0.0040		mg/L		09/21/15 17:30	09/23/15 04:35	10
Manganese	3.1		0.020		mg/L		09/21/15 17:30	09/23/15 04:35	10
Selenium	ND		0.010		mg/L		09/21/15 17:30	09/23/15 04:35	10
Silver	ND		0.0040		mg/L		09/21/15 17:30	09/23/15 04:35	10
Zinc	ND		0.070		mg/L		09/21/15 17:30	09/23/15 04:35	10

### Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.023		0.0050		mg/L		09/22/15 09:37	09/23/15 01:51	5
Barium	0.033		0.0060		mg/L		09/22/15 09:37	09/23/15 01:51	5
Cadmium	ND		0.0020		mg/L		09/22/15 09:37	09/23/15 01:51	5

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53243-1

**Client Sample ID: CR-30A-SC-CHEV**

Date Collected: 09/11/15 11:10

Date Received: 09/11/15 14:10

**Lab Sample ID: 580-53243-4**

Matrix: Water

**Method: 6020 - Metals (ICP/MS) - Dissolved (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	ND		0.0020		mg/L		09/22/15 09:37	09/23/15 01:51	5
Copper	ND		0.010		mg/L		09/22/15 09:37	09/23/15 01:51	5
Lead	ND		0.0020		mg/L		09/22/15 09:37	09/23/15 01:51	5
Manganese	3.5		0.010		mg/L		09/22/15 09:37	09/23/15 01:51	5
Selenium	ND		0.0050		mg/L		09/22/15 09:37	09/23/15 01:51	5
Silver	ND		0.0020		mg/L		09/22/15 09:37	09/23/15 01:51	5
Zinc	ND		0.035		mg/L		09/22/15 09:37	09/23/15 01:51	5

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		09/29/15 06:53	09/29/15 11:45	1

**Method: 7470A - Mercury (CVAA) - Dissolved**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		09/29/15 06:53	09/29/15 11:47	1

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53243-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 580-201735/4**

**Matrix: Water**

**Analysis Batch: 201735**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		2.0		ug/L			09/25/15 13:24	1
Ethylbenzene	ND		3.0		ug/L			09/25/15 13:24	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/25/15 13:24	1
m-Xylene & p-Xylene	ND		3.0		ug/L			09/25/15 13:24	1
o-Xylene	ND		2.0		ug/L			09/25/15 13:24	1
Toluene	ND		2.0		ug/L			09/25/15 13:24	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	107		75 - 120		09/25/15 13:24	1
Dibromofluoromethane (Surr)	112		85 - 115		09/25/15 13:24	1
1,2-Dichloroethane-d4 (Surr)	123	X	70 - 120		09/25/15 13:24	1
Toluene-d8 (Surr)	107		85 - 120		09/25/15 13:24	1
Trifluorotoluene (Surr)	102		70 - 136		09/25/15 13:24	1

**Lab Sample ID: LCS 580-201735/5**

**Matrix: Water**

**Analysis Batch: 201735**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike	LCS	LCS	D	%Rec	%Rec.	Limits
	Added	Result	Qualifier				
Benzene	20.1	21.1		ug/L	105	80 - 120	
Ethylbenzene	20.1	22.6		ug/L	112	75 - 125	
Methyl tert-butyl ether	20.0	23.8		ug/L	119	65 - 125	
m-Xylene & p-Xylene	20.0	22.9		ug/L	114	75 - 130	
o-Xylene	20.0	23.2		ug/L	116	80 - 120	
Toluene	20.0	21.1		ug/L	105	75 - 120	

Surrogate	LCSD	LCSD	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	99		75 - 120			
Dibromofluoromethane (Surr)	110		85 - 115			
1,2-Dichloroethane-d4 (Surr)	117		70 - 120			
Toluene-d8 (Surr)	100		85 - 120			
Trifluorotoluene (Surr)	101		70 - 136			

**Lab Sample ID: LCSD 580-201735/6**

**Matrix: Water**

**Analysis Batch: 201735**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike	LCSD	LCSD	D	%Rec	%Rec.	RPD	RPD Limit
	Added	Result	Qualifier					
Benzene	20.1	21.4		ug/L	107	80 - 120	1	30
Ethylbenzene	20.1	23.3		ug/L	116	75 - 125	3	30
Methyl tert-butyl ether	20.0	22.4		ug/L	112	65 - 125	6	30
m-Xylene & p-Xylene	20.0	23.4		ug/L	117	75 - 130	2	30
o-Xylene	20.0	23.9		ug/L	119	80 - 120	3	30
Toluene	20.0	21.6		ug/L	108	75 - 120	2	30

Surrogate	LCSD	LCSD	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	98		75 - 120			

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# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53243-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID:** LCSD 580-201735/6

**Matrix:** Water

**Analysis Batch:** 201735

**Client Sample ID:** Lab Control Sample Dup

**Prep Type:** Total/NA

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Dibromofluoromethane (Surr)	109		85 - 115
1,2-Dichloroethane-d4 (Surr)	111		70 - 120
Toluene-d8 (Surr)	98		85 - 120
Trifluorotoluene (Surr)	99		70 - 136

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

**Lab Sample ID:** MB 580-201093/1-A

**Matrix:** Water

**Analysis Batch:** 202181

**Client Sample ID:** Method Blank

**Prep Type:** Total/NA

**Prep Batch:** 201093

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	MB Result	MB Qualifier	RL	MDL	Unit		Prepared	Analyzed	
Naphthalene	ND		0.010		ug/L	09/17/15 17:01	09/30/15 18:36		1
2-Methylnaphthalene	ND		0.013		ug/L	09/17/15 17:01	09/30/15 18:36		1
1-Methylnaphthalene	ND		0.010		ug/L	09/17/15 17:01	09/30/15 18:36		1
Acenaphthylene	ND		0.010		ug/L	09/17/15 17:01	09/30/15 18:36		1
Acenaphthene	ND		0.010		ug/L	09/17/15 17:01	09/30/15 18:36		1
Fluorene	ND		0.010		ug/L	09/17/15 17:01	09/30/15 18:36		1
Phenanthrene	ND		0.10		ug/L	09/17/15 17:01	09/30/15 18:36		1
Anthracene	ND		0.025		ug/L	09/17/15 17:01	09/30/15 18:36		1
Fluoranthene	ND		0.050		ug/L	09/17/15 17:01	09/30/15 18:36		1
Pyrene	ND		0.050		ug/L	09/17/15 17:01	09/30/15 18:36		1
Benzo[a]anthracene	ND		0.010		ug/L	09/17/15 17:01	09/30/15 18:36		1
Chrysene	ND		0.010		ug/L	09/17/15 17:01	09/30/15 18:36		1
Benzo[a]pyrene	ND		0.010		ug/L	09/17/15 17:01	09/30/15 18:36		1
Indeno[1,2,3-cd]pyrene	ND		0.010		ug/L	09/17/15 17:01	09/30/15 18:36		1
Dibenz(a,h)anthracene	ND		0.010		ug/L	09/17/15 17:01	09/30/15 18:36		1
Benzo[g,h,i]perylene	ND		0.010		ug/L	09/17/15 17:01	09/30/15 18:36		1
Benzo[b]fluoranthene	ND		0.010		ug/L	09/17/15 17:01	09/30/15 18:36		1
Benzo[k]fluoranthene	ND		0.010		ug/L	09/17/15 17:01	09/30/15 18:36		1
Surrogate	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Terphenyl-d14	102			64 - 150			09/17/15 17:01	09/30/15 18:36	1

**Lab Sample ID:** LCS 580-201093/2-A

**Matrix:** Water

**Analysis Batch:** 202181

**Client Sample ID:** Lab Control Sample

**Prep Type:** Total/NA

**Prep Batch:** 201093

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits	%Rec.
	Added	Result	Qualifier	Unit				
Naphthalene	1.00	0.776		ug/L	78	54 - 106		
2-Methylnaphthalene	1.00	0.823		ug/L	82	54 - 114		
1-Methylnaphthalene	1.00	0.818		ug/L	82	57 - 115		
Acenaphthylene	1.00	0.344		ug/L	34	30 - 127		
Acenaphthene	1.00	0.744		ug/L	74	54 - 109		
Fluorene	1.00	0.831		ug/L	83	50 - 130		
Phenanthrene	1.00	0.863		ug/L	86	53 - 115		
Anthracene	1.00	0.223 *		ug/L	22	30 - 130		

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53243-1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

**Lab Sample ID: LCS 580-201093/2-A**

**Matrix: Water**

**Analysis Batch: 202181**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 201093**

**%Rec.**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Fluoranthene	1.00	0.777		ug/L	78	58 - 128	
Pyrene	1.00	0.697		ug/L	70	53 - 121	
Benzo[a]anthracene	1.00	0.582		ug/L	58	35 - 125	
Chrysene	1.00	0.833		ug/L	83	57 - 120	
Benzo[a]pyrene	1.00	0.100	*	ug/L	10	30 - 127	
Indeno[1,2,3-cd]pyrene	1.00	0.933		ug/L	93	53 - 131	
Dibenz(a,h)anthracene	1.00	1.07		ug/L	107	60 - 136	
Benzo[g,h,i]perylene	1.00	0.896		ug/L	90	51 - 128	
Benzo[b]fluoranthene	1.00	0.993		ug/L	99	59 - 126	
Benzo[k]fluoranthene	1.00	0.908		ug/L	91	49 - 136	

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Terphenyl-d14	91		64 - 150

**Lab Sample ID: LCSD 580-201093/3-A**

**Matrix: Water**

**Analysis Batch: 202181**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 201093**

**%Rec.**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Naphthalene	1.00	0.758		ug/L	76	54 - 106		2	20
2-Methylnaphthalene	1.00	0.802		ug/L	80	54 - 114		3	20
1-Methylnaphthalene	1.00	0.799		ug/L	80	57 - 115		2	20
Acenaphthylene	1.00	0.299		ug/L	30	30 - 127		14	20
Acenaphthene	1.00	0.705		ug/L	70	54 - 109		5	20
Fluorene	1.00	0.812		ug/L	81	50 - 130		2	20
Phenanthrene	1.00	0.829		ug/L	83	53 - 115		4	20
Anthracene	1.00	0.256	*	ug/L	26	30 - 130		14	20
Fluoranthene	1.00	0.737		ug/L	74	58 - 128		5	20
Pyrene	1.00	0.633		ug/L	63	53 - 121		10	20
Benzo[a]anthracene	1.00	0.552		ug/L	55	35 - 125		5	20
Chrysene	1.00	0.800		ug/L	80	57 - 120		4	20
Benzo[a]pyrene	1.00	ND	*	ug/L	0	30 - 127		200	20
Indeno[1,2,3-cd]pyrene	1.00	0.779		ug/L	78	53 - 131		18	20
Dibenz(a,h)anthracene	1.00	0.930		ug/L	93	60 - 136		14	20
Benzo[g,h,i]perylene	1.00	0.442	*	ug/L	44	51 - 128		68	20
Benzo[b]fluoranthene	1.00	0.893		ug/L	89	59 - 126		11	20
Benzo[k]fluoranthene	1.00	0.795		ug/L	79	49 - 136		13	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Terphenyl-d14	87		64 - 150

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53243-1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) - RE

**Lab Sample ID: MB 580-202974/1-A**

**Matrix: Water**

**Analysis Batch: 204037**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 202974**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene - RE	ND		0.010		ug/L				1
2-Methylnaphthalene - RE	ND		0.013		ug/L	10/10/15 11:07	10/22/15 14:18		1
1-Methylnaphthalene - RE	ND		0.010		ug/L	10/10/15 11:07	10/22/15 14:18		1
Acenaphthylene - RE	ND		0.010		ug/L	10/10/15 11:07	10/22/15 14:18		1
Acenaphthene - RE	ND		0.010		ug/L	10/10/15 11:07	10/22/15 14:18		1
Fluorene - RE	ND		0.010		ug/L	10/10/15 11:07	10/22/15 14:18		1
Phenanthrene - RE	ND		0.10		ug/L	10/10/15 11:07	10/22/15 14:18		1
Anthracene - RE	ND		0.025		ug/L	10/10/15 11:07	10/22/15 14:18		1
Fluoranthene - RE	ND		0.050		ug/L	10/10/15 11:07	10/22/15 14:18		1
Pyrene - RE	ND		0.050		ug/L	10/10/15 11:07	10/22/15 14:18		1
Benzo[a]anthracene - RE	ND		0.010		ug/L	10/10/15 11:07	10/22/15 14:18		1
Chrysene - RE	ND		0.010		ug/L	10/10/15 11:07	10/22/15 14:18		1
Benzo[a]pyrene - RE	ND		0.010		ug/L	10/10/15 11:07	10/22/15 14:18		1
Indeno[1,2,3-cd]pyrene - RE	ND		0.010		ug/L	10/10/15 11:07	10/22/15 14:18		1
Dibenz(a,h)anthracene - RE	ND		0.010		ug/L	10/10/15 11:07	10/22/15 14:18		1
Benzo[g,h,i]perylene - RE	ND		0.010		ug/L	10/10/15 11:07	10/22/15 14:18		1
Benzo[b]fluoranthene - RE	ND		0.010		ug/L	10/10/15 11:07	10/22/15 14:18		1
Benzo[k]fluoranthene - RE	ND		0.010		ug/L	10/10/15 11:07	10/22/15 14:18		1
Surrogate	MB %Recovery	MB Qualifier	MB Limits				Prepared	Analyzed	Dil Fac
Terphenyl-d14 - RE	64		64 - 150				10/10/15 11:07	10/22/15 14:18	1

**Lab Sample ID: LCS 580-202974/2-A**

**Matrix: Water**

**Analysis Batch: 204037**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 202974**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	Limits
Naphthalene - RE	1.00	0.658		ug/L		66	54 - 106	
2-Methylnaphthalene - RE	1.00	0.685		ug/L		68	54 - 114	
1-Methylnaphthalene - RE	1.00	0.699		ug/L		70	57 - 115	
Acenaphthylene - RE	1.00	0.625		ug/L		63	30 - 127	
Acenaphthene - RE	1.00	0.652		ug/L		65	54 - 109	
Fluorene - RE	1.00	0.676		ug/L		68	50 - 130	
Phenanthrene - RE	1.00	0.740		ug/L		74	53 - 115	
Anthracene - RE	1.00	0.439		ug/L		44	30 - 130	
Fluoranthene - RE	1.00	0.685		ug/L		68	58 - 128	
Pyrene - RE	1.00	0.648		ug/L		65	53 - 121	
Benzo[a]anthracene - RE	1.00	0.629		ug/L		63	35 - 125	
Chrysene - RE	1.00	0.772		ug/L		77	57 - 120	
Benzo[a]pyrene - RE	1.00	0.471		ug/L		47	30 - 127	
Indeno[1,2,3-cd]pyrene - RE	1.00	0.892		ug/L		89	53 - 131	
Dibenz(a,h)anthracene - RE	1.00	0.941		ug/L		94	60 - 136	
Benzo[g,h,i]perylene - RE	1.00	0.861		ug/L		86	51 - 128	
Benzo[b]fluoranthene - RE	1.00	0.863		ug/L		86	59 - 126	
Benzo[k]fluoranthene - RE	1.00	0.885		ug/L		88	49 - 136	

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53243-1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) - RE (Continued)

**Lab Sample ID:** LCS 580-202974/2-A

**Matrix:** Water

**Analysis Batch:** 204037

**Client Sample ID:** Lab Control Sample

**Prep Type:** Total/NA

**Prep Batch:** 202974

Surrogate	LCS	LCS	%Recovery	Qualifier	Limits
Terphenyl-d14 - RE			74		64 - 150

**Lab Sample ID:** LCSD 580-202974/3-A

**Matrix:** Water

**Analysis Batch:** 204037

**Client Sample ID:** Lab Control Sample Dup

**Prep Type:** Total/NA

**Prep Batch:** 202974

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec.	Limits	RPD	Limit
Naphthalene - RE	1.00	0.724		ug/L	72	54 - 106	10	20	
2-Methylnaphthalene - RE	1.00	0.747		ug/L	75	54 - 114	9	20	
1-Methylnaphthalene - RE	1.00	0.775		ug/L	78	57 - 115	10	20	
Acenaphthylene - RE	1.00	0.680		ug/L	68	30 - 127	8	20	
Acenaphthene - RE	1.00	0.720		ug/L	72	54 - 109	10	20	
Fluorene - RE	1.00	0.735		ug/L	74	50 - 130	8	20	
Phenanthrene - RE	1.00	0.791		ug/L	79	53 - 115	7	20	
Anthracene - RE	1.00	0.466		ug/L	47	30 - 130	6	20	
Fluoranthene - RE	1.00	0.707		ug/L	71	58 - 128	3	20	
Pyrene - RE	1.00	0.674		ug/L	67	53 - 121	4	20	
Benzo[a]anthracene - RE	1.00	0.670		ug/L	67	35 - 125	6	20	
Chrysene - RE	1.00	0.826		ug/L	83	57 - 120	7	20	
Benzo[a]pyrene - RE	1.00	0.475		ug/L	47	30 - 127	1	20	
Indeno[1,2,3-cd]pyrene - RE	1.00	0.962		ug/L	96	53 - 131	8	20	
Dibenz(a,h)anthracene - RE	1.00	1.01		ug/L	101	60 - 136	7	20	
Benzo[g,h,i]perylene - RE	1.00	0.922		ug/L	92	51 - 128	7	20	
Benzo[b]fluoranthene - RE	1.00	0.925		ug/L	92	59 - 126	7	20	
Benzo[k]fluoranthene - RE	1.00	0.922		ug/L	92	49 - 136	4	20	

Surrogate	LCSD	LCSD	%Recovery	Qualifier	Limits
Terphenyl-d14 - RE			75		64 - 150

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

**Lab Sample ID:** MB 580-201281/5

**Matrix:** Water

**Analysis Batch:** 201281

**Client Sample ID:** Method Blank

**Prep Type:** Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050		mg/L			09/20/15 17:44	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		50 - 150					09/20/15 17:44	1
Trifluorotoluene (Surr)	112		50 - 150					09/20/15 17:44	1

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53243-1

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC) (Continued)

**Lab Sample ID: LCS 580-201281/6**

**Matrix: Water**

**Analysis Batch: 201281**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.
Gasoline	1.16	1.09		mg/L		94	79 - 110
Surrogate	%Recovery	LCS Qualifier	Limits				Limits
4-Bromofluorobenzene (Surr)	98		50 - 150				
Trifluorotoluene (Surr)	117		50 - 150				

**Lab Sample ID: LCSD 580-201281/7**

**Matrix: Water**

**Analysis Batch: 201281**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.	RPD
Gasoline	1.16	1.09		mg/L		93	79 - 110	1
Surrogate	%Recovery	LCSD Qualifier	Limits				Limits	RPD
4-Bromofluorobenzene (Surr)	98		50 - 150					
Trifluorotoluene (Surr)	117		50 - 150					

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

**Lab Sample ID: MB 580-201411/1-A**

**Matrix: Water**

**Analysis Batch: 201839**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 201411**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.11		mg/L		09/22/15 11:29	09/28/15 20:56	1
Motor Oil (>C24-C36)	ND		0.25		mg/L		09/22/15 11:29	09/28/15 20:56	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	94		50 - 150				09/22/15 11:29	09/28/15 20:56	1

**Lab Sample ID: LCS 580-201411/2-A**

**Matrix: Water**

**Analysis Batch: 201839**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 201411**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.
#2 Diesel (C10-C24)	0.500	0.446		mg/L		89	59 - 120
Motor Oil (>C24-C36)	0.502	0.418		mg/L		83	71 - 140
Surrogate	%Recovery	LCS Qualifier	Limits				Limits
o-Terphenyl	97		50 - 150				

**Lab Sample ID: LCSD 580-201411/3-A**

**Matrix: Water**

**Analysis Batch: 201839**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 201411**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.	RPD
#2 Diesel (C10-C24)	0.500	0.441		mg/L		88	59 - 120	1

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53243-1

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

**Lab Sample ID: LCSD 580-201411/3-A**

**Matrix: Water**

**Analysis Batch: 201839**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 201411**

**%Rec.**

**RPD**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Motor Oil (>C24-C36)	0.502	0.418		mg/L		83	71 - 140	0	27
Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits						
<i>o-Terphenyl</i>	97		50 - 150						

## Method: 6020 - Metals (ICP/MS)

**Lab Sample ID: MB 580-201350/23-A**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 201350**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.010		mg/L		09/21/15 17:30	09/23/15 02:14	10
Barium	ND		0.012		mg/L		09/21/15 17:30	09/23/15 02:14	10
Cadmium	ND		0.0040		mg/L		09/21/15 17:30	09/23/15 02:14	10
Chromium	ND		0.0040		mg/L		09/21/15 17:30	09/23/15 02:14	10
Copper	ND		0.020		mg/L		09/21/15 17:30	09/23/15 02:14	10
Lead	ND		0.0040		mg/L		09/21/15 17:30	09/23/15 02:14	10
Manganese	ND		0.020		mg/L		09/21/15 17:30	09/23/15 02:14	10
Selenium	ND		0.010		mg/L		09/21/15 17:30	09/23/15 02:14	10
Silver	ND		0.0040		mg/L		09/21/15 17:30	09/23/15 02:14	10
Zinc	ND		0.070		mg/L		09/21/15 17:30	09/23/15 02:14	10

**Lab Sample ID: LCS 580-201350/24-A**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 201350**

**%Rec.**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits		
Arsenic	4.00	4.03		mg/L		101	80 - 120		
Barium	4.00	4.13		mg/L		103	80 - 120		
Cadmium	0.100	0.102		mg/L		102	80 - 120		
Chromium	0.400	0.405		mg/L		101	80 - 120		
Copper	0.500	0.501		mg/L		100	80 - 120		
Lead	1.00	0.972		mg/L		97	80 - 120		
Manganese	1.00	1.01		mg/L		101	80 - 120		
Selenium	4.00	4.22		mg/L		106	80 - 120		
Silver	0.600	0.587		mg/L		98	80 - 120		
Zinc	4.00	3.99		mg/L		100	80 - 120		

**Lab Sample ID: LCSD 580-201350/25-A**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 201350**

**%Rec.**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	4.00	4.01		mg/L		100	80 - 120	0	20
Barium	4.00	4.09		mg/L		102	80 - 120	1	20
Cadmium	0.100	0.101		mg/L		101	80 - 120	0	20
Chromium	0.400	0.399		mg/L		100	80 - 120	1	20

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53243-1

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: LCSD 580-201350/25-A**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 201350**

**%Rec.**

**RPD**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Copper	0.500	0.500		mg/L		100	80 - 120	0	20
Lead	1.00	0.975		mg/L		97	80 - 120	0	20
Manganese	1.00	1.01		mg/L		101	80 - 120	0	20
Selenium	4.00	4.19		mg/L		105	80 - 120	1	20
Silver	0.600	0.590		mg/L		98	80 - 120	0	20
Zinc	4.00	4.01		mg/L		100	80 - 120	0	20

**Lab Sample ID: 580-53155-D-2-C MS**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: Matrix Spike**

**Prep Type: Total/NA**

**Prep Batch: 201350**

**%Rec.**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Arsenic	ND		4.00	4.21		mg/L		105	80 - 120
Barium	0.063		4.00	4.41		mg/L		109	80 - 120
Cadmium	ND		0.100	0.105		mg/L		104	80 - 120
Chromium	ND		0.400	0.434		mg/L		108	80 - 120
Copper	ND		0.500	0.535		mg/L		105	80 - 120
Lead	ND		1.00	1.05		mg/L		104	80 - 120
Manganese	5.0		1.00	6.20	4	mg/L		120	80 - 120
Selenium	ND		4.00	4.44		mg/L		111	80 - 120
Silver	ND		0.600	0.608		mg/L		101	80 - 120
Zinc	ND		4.00	4.25		mg/L		105	80 - 120

**Lab Sample ID: 580-53155-D-2-D MSD**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total/NA**

**Prep Batch: 201350**

**%Rec.**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	RPD	Limit	
Arsenic	ND		4.00	4.25		mg/L		106	80 - 120	1	20
Barium	0.063		4.00	4.42		mg/L		109	80 - 120	0	20
Cadmium	ND		0.100	0.115		mg/L		114	80 - 120	9	20
Chromium	ND		0.400	0.442		mg/L		110	80 - 120	2	20
Copper	ND		0.500	0.536		mg/L		105	80 - 120	0	20
Lead	ND		1.00	1.05		mg/L		105	80 - 120	1	20
Manganese	5.0		1.00	6.30	4	mg/L		129	80 - 120	2	20
Selenium	ND		4.00	4.45		mg/L		111	80 - 120	0	20
Silver	ND		0.600	0.620		mg/L		103	80 - 120	2	20
Zinc	ND		4.00	4.27		mg/L		106	80 - 120	1	20

**Lab Sample ID: 580-53155-D-2-B DU**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: Duplicate**

**Prep Type: Total/NA**

**Prep Batch: 201350**

**RPD**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Arsenic	ND		ND		mg/L		NC	20
Barium	0.063		0.0606		mg/L		4	20
Cadmium	ND		ND		mg/L		NC	20
Chromium	ND		ND		mg/L		NC	20
Copper	ND		ND		mg/L		NC	20

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53243-1

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: 580-53155-D-2-B DU**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: Duplicate**

**Prep Type: Total/NA**

**Prep Batch: 201350**

**RPD**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Lead	ND		ND		mg/L		NC	20
Manganese	5.0		4.95		mg/L		1	20
Selenium	ND		ND		mg/L		NC	20
Silver	ND		ND		mg/L		NC	20
Zinc	ND		ND		mg/L		NC	20

**Lab Sample ID: MB 580-201387/21-A**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: Method Blank**

**Prep Type: Total Recoverable**

**Prep Batch: 201387**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0050		mg/L		09/22/15 09:37	09/23/15 00:01	5
Barium	ND		0.0060		mg/L		09/22/15 09:37	09/23/15 00:01	5
Cadmium	ND		0.0020		mg/L		09/22/15 09:37	09/23/15 00:01	5
Chromium	ND		0.0020		mg/L		09/22/15 09:37	09/23/15 00:01	5
Copper	ND		0.010		mg/L		09/22/15 09:37	09/23/15 00:01	5
Lead	ND		0.0020		mg/L		09/22/15 09:37	09/23/15 00:01	5
Manganese	ND		0.010		mg/L		09/22/15 09:37	09/23/15 00:01	5
Selenium	ND		0.0050		mg/L		09/22/15 09:37	09/23/15 00:01	5
Silver	ND		0.0020		mg/L		09/22/15 09:37	09/23/15 00:01	5
Zinc	ND		0.035		mg/L		09/22/15 09:37	09/23/15 00:01	5

**Lab Sample ID: LCS 580-201387/22-A**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total Recoverable**

**Prep Batch: 201387**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Arsenic	4.00	4.04		mg/L		101	80 - 120
Barium	4.00	4.14		mg/L		103	80 - 120
Cadmium	0.100	0.103		mg/L		103	80 - 120
Chromium	0.400	0.406		mg/L		101	80 - 120
Copper	0.500	0.501		mg/L		100	80 - 120
Lead	1.00	0.976		mg/L		98	80 - 120
Manganese	1.00	1.01		mg/L		101	80 - 120
Selenium	4.00	4.30		mg/L		108	80 - 120
Silver	0.600	0.594		mg/L		99	80 - 120
Zinc	4.00	3.99		mg/L		100	80 - 120

**Lab Sample ID: LCSD 580-201387/23-A**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total Recoverable**

**Prep Batch: 201387**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	4.00	4.00		mg/L		100	80 - 120	1	20
Barium	4.00	4.13		mg/L		103	80 - 120	0	20
Cadmium	0.100	0.0992		mg/L		99	80 - 120	4	20
Chromium	0.400	0.399		mg/L		100	80 - 120	2	20
Copper	0.500	0.498		mg/L		100	80 - 120	1	20
Lead	1.00	0.968		mg/L		97	80 - 120	1	20

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53243-1

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: LCSD 580-201387/23-A**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total Recoverable**

**Prep Batch: 201387**

**%Rec.**

**RPD**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Manganese	1.00	0.996		mg/L		100	80 - 120	2	20
Selenium	4.00	4.18		mg/L		104	80 - 120	3	20
Silver	0.600	0.584		mg/L		97	80 - 120	2	20
Zinc	4.00	3.99		mg/L		100	80 - 120	0	20

**Lab Sample ID: LCSSRM 580-201387/24-A**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total Recoverable**

**Prep Batch: 201387**

**%Rec.**

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	Limits		
Arsenic	4.00	4.04		mg/L		101	80 - 120		
Barium	4.00	4.16		mg/L		104	80 - 120		
Cadmium	0.100	0.101		mg/L		101	80 - 120		
Chromium	0.400	0.409		mg/L		102	80 - 120		
Copper	0.500	0.502		mg/L		100	80 - 120		
Lead	1.00	0.975		mg/L		98	80 - 120		
Manganese	1.00	0.997		mg/L		100	80 - 120		
Selenium	4.00	4.26		mg/L		107	80 - 120		
Silver	0.600	0.592		mg/L		99	80 - 120		
Zinc	4.00	4.03		mg/L		101	80 - 120		

**Lab Sample ID: 580-53091-K-3-C MS**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: Matrix Spike**

**Prep Type: Total Recoverable**

**Prep Batch: 201387**

**%Rec.**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits		
Arsenic	0.0059		4.00	4.27		mg/L		107	80 - 120		
Barium	0.028		4.00	4.41		mg/L		109	80 - 120		
Cadmium	ND		0.100	0.108		mg/L		108	80 - 120		
Chromium	ND		0.400	0.431		mg/L		108	80 - 120		
Copper	ND		0.500	0.535		mg/L		107	80 - 120		
Lead	ND		1.00	1.06		mg/L		106	80 - 120		
Manganese	0.080		1.00	1.17		mg/L		109	80 - 120		
Selenium	ND		4.00	4.48		mg/L		112	80 - 120		
Silver	ND		0.600	0.620		mg/L		103	80 - 120		
Zinc	ND		4.00	4.25		mg/L		106	80 - 120		

**Lab Sample ID: 580-53091-K-3-D MSD**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total Recoverable**

**Prep Batch: 201387**

**%Rec.**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	0.0059		4.00	4.22		mg/L		105	80 - 120	1	20
Barium	0.028		4.00	4.40		mg/L		109	80 - 120	0	20
Cadmium	ND		0.100	0.108		mg/L		108	80 - 120	1	20
Chromium	ND		0.400	0.433		mg/L		108	80 - 120	1	20
Copper	ND		0.500	0.532		mg/L		106	80 - 120	1	20
Lead	ND		1.00	1.04		mg/L		104	80 - 120	1	20
Manganese	0.080		1.00	1.16		mg/L		108	80 - 120	1	20

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53243-1

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: 580-53091-K-3-D MSD**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total Recoverable**

**Prep Batch: 201387**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier						
Selenium	ND		4.00	4.45		mg/L		111	80 - 120	0	20
Silver	ND		0.600	0.612		mg/L		102	80 - 120	1	20
Zinc	ND		4.00	4.18		mg/L		104	80 - 120	2	20

**Lab Sample ID: 580-53091-K-3-B DU**

**Matrix: Water**

**Analysis Batch: 201490**

**Client Sample ID: Duplicate**

**Prep Type: Total Recoverable**

**Prep Batch: 201387**

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Arsenic	0.0059		0.00596		mg/L		1	20
Barium	0.028		0.0273		mg/L		4	20
Cadmium	ND		ND		mg/L		NC	20
Chromium	ND		ND		mg/L		NC	20
Copper	ND		ND		mg/L		NC	20
Lead	ND		ND		mg/L		NC	20
Manganese	0.080		0.0778		mg/L		2	20
Selenium	ND		ND		mg/L		NC	20
Silver	ND		ND		mg/L		NC	20
Zinc	ND		ND		mg/L		NC	20

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 580-201962/21-A**

**Matrix: Water**

**Analysis Batch: 202007**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 201962**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	ND		0.00020		mg/L		09/29/15 06:53	09/29/15 11:15	1

**Lab Sample ID: LCS 580-201962/22-A**

**Matrix: Water**

**Analysis Batch: 202007**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 201962**

Analyte	Spike	LCS	LCS	Unit	D	%Rec	Limits
	Added	Result	Qualifier				
Mercury	0.00200	0.00173		mg/L		87	80 - 120

**Lab Sample ID: LCSD 580-201962/23-A**

**Matrix: Water**

**Analysis Batch: 202007**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 201962**

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec	Limits	RPD	Limit
	Added	Result	Qualifier						
Mercury	0.00200	0.00179		mg/L		89	80 - 120	3	20

**Lab Sample ID: 580-53389-C-1-D MS**

**Matrix: Water**

**Analysis Batch: 202007**

**Client Sample ID: Matrix Spike**

**Prep Type: Total/NA**

**Prep Batch: 201962**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier				
Mercury	ND		0.00200	0.00180		mg/L		90	80 - 120

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53243-1

## Method: 7470A - Mercury (CVAA) (Continued)

**Lab Sample ID: 580-53389-C-1-E MSD**

**Matrix: Water**

**Analysis Batch: 202007**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec.	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier					
Mercury	ND		0.00200	0.00178		mg/L		89	80 - 120	1 20

**Lab Sample ID: 580-53389-C-1-C DU**

**Matrix: Water**

**Analysis Batch: 202007**

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Mercury	ND		ND		mg/L			NC 20

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total/NA**

**Prep Batch: 201962**

**Client Sample ID: Duplicate**

**Prep Type: Total/NA**

**Prep Batch: 201962**

**RPD**

**Limit**

**NC 20**

# Lab Chronicle

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53243-1

**Client Sample ID: CR-31B-SC-CHEV**

**Date Collected: 09/11/15 09:30**

**Date Received: 09/11/15 14:10**

**Lab Sample ID: 580-53243-1**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	201735	09/25/15 15:48	K1K	TAL SEA
Total/NA	Prep	3520C			201093	09/17/15 17:01	JDR	TAL SEA
Total/NA	Analysis	8270C SIM		1	202181	09/30/15 21:17	ERZ	TAL SEA
Total/NA	Prep	3520C	RE		202974	10/10/15 11:07	JDR	TAL SEA
Total/NA	Analysis	8270C SIM	RE	10	204128	10/23/15 15:22	ERZ	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	201281	09/21/15 05:51	HDK	TAL SEA
Total/NA	Prep	3510C			201411	09/22/15 11:29	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	203052	10/12/15 12:42	NMI	TAL SEA
Dissolved	Prep	3005A			201387	09/22/15 09:37	MKN	TAL SEA
Dissolved	Analysis	6020		5	201490	09/23/15 01:33	FCW	TAL SEA
Total/NA	Prep	3010A			201350	09/21/15 17:30	PAB	TAL SEA
Total/NA	Analysis	6020		10	201490	09/23/15 04:26	FCW	TAL SEA
Dissolved	Prep	7470A			201962	09/29/15 06:53	MKN	TAL SEA
Dissolved	Analysis	7470A		1	202007	09/29/15 12:15	FCW	TAL SEA
Total/NA	Prep	7470A			201962	09/29/15 06:53	MKN	TAL SEA
Total/NA	Analysis	7470A		1	202007	09/29/15 12:13	FCW	TAL SEA

**Client Sample ID: CR-31A-SC-CHEV**

**Date Collected: 09/11/15 08:50**

**Date Received: 09/11/15 14:10**

**Lab Sample ID: 580-53243-2**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	201735	09/25/15 16:18	K1K	TAL SEA
Total/NA	Prep	3520C			201093	09/17/15 17:01	JDR	TAL SEA
Total/NA	Analysis	8270C SIM		1	202181	09/30/15 21:40	ERZ	TAL SEA
Total/NA	Prep	3520C	RE		202974	10/10/15 11:07	JDR	TAL SEA
Total/NA	Analysis	8270C SIM	RE	50	204128	10/23/15 15:45	ERZ	TAL SEA
Total/NA	Prep	3520C	DL		201093	09/17/15 17:01	JDR	TAL SEA
Total/NA	Analysis	8270C SIM	DL	10	204170	10/24/15 16:41	ERZ	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	201281	09/21/15 06:24	HDK	TAL SEA
Total/NA	Prep	3510C			201411	09/22/15 11:29	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	201516	09/23/15 21:05	KW	TAL SEA
Dissolved	Prep	3005A			201387	09/22/15 09:37	MKN	TAL SEA
Dissolved	Analysis	6020		5	201490	09/23/15 01:37	FCW	TAL SEA
Total/NA	Prep	3010A			201350	09/21/15 17:30	PAB	TAL SEA
Total/NA	Analysis	6020		10	201490	09/23/15 04:31	FCW	TAL SEA
Dissolved	Prep	7470A			201962	09/29/15 06:53	MKN	TAL SEA
Dissolved	Analysis	7470A		1	202007	09/29/15 11:36	FCW	TAL SEA
Total/NA	Prep	7470A			201962	09/29/15 06:53	MKN	TAL SEA
Total/NA	Analysis	7470A		1	202007	09/29/15 11:43	FCW	TAL SEA

TestAmerica Seattle

# Lab Chronicle

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53243-1

## Client Sample ID: Trip Blank

Date Collected: 09/11/15 00:00

Date Received: 09/11/15 14:10

## Lab Sample ID: 580-53243-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	NWTPH-Gx		1	201281	09/20/15 19:56	HDK	TAL SEA

## Client Sample ID: CR-30A-SC-CHEV

Date Collected: 09/11/15 11:10

Date Received: 09/11/15 14:10

## Lab Sample ID: 580-53243-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	201735	09/25/15 16:46	K1K	TAL SEA
Total/NA	Prep	3520C			201093	09/17/15 17:01	JDR	TAL SEA
Total/NA	Analysis	8270C SIM		1	202181	09/30/15 22:04	ERZ	TAL SEA
Total/NA	Prep	3520C	RE		202974	10/10/15 11:07	JDR	TAL SEA
Total/NA	Analysis	8270C SIM	RE	10	204128	10/23/15 16:08	ERZ	TAL SEA
Total/NA	Prep	3520C	DL		201093	09/17/15 17:01	JDR	TAL SEA
Total/NA	Analysis	8270C SIM	DL	10	204170	10/24/15 17:04	ERZ	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	201281	09/21/15 06:58	HDK	TAL SEA
Total/NA	Prep	3510C			201411	09/22/15 11:29	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	201516	09/23/15 21:23	KW	TAL SEA
Dissolved	Prep	3005A			201387	09/22/15 09:37	MKN	TAL SEA
Dissolved	Analysis	6020		5	201490	09/23/15 01:51	FCW	TAL SEA
Total/NA	Prep	3010A			201350	09/21/15 17:30	PAB	TAL SEA
Total/NA	Analysis	6020		10	201490	09/23/15 04:35	FCW	TAL SEA
Dissolved	Prep	7470A			201962	09/29/15 06:53	MKN	TAL SEA
Dissolved	Analysis	7470A		1	202007	09/29/15 11:47	FCW	TAL SEA
Total/NA	Prep	7470A			201962	09/29/15 06:53	MKN	TAL SEA
Total/NA	Analysis	7470A		1	202007	09/29/15 11:45	FCW	TAL SEA

### Laboratory References:

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

TestAmerica Seattle

# Certification Summary

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53243-1

## Laboratory: TestAmerica Seattle

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-022	03-02-16
California	State Program	9	2901	01-31-17
L-A-B	DoD ELAP		L2236	01-19-16
L-A-B	ISO/IEC 17025		L2236	01-19-16
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-06-16
US Fish & Wildlife	Federal		LE058448-0	02-28-16
USDA	Federal		P330-14-00126	04-08-17
Washington	State Program	10	C553	02-17-16

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TestAmerica Seattle

## Sample Summary

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53243-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-53243-1	CR-31B-SC-CHEV	Water	09/11/15 09:30	09/11/15 14:10
580-53243-2	CR-31A-SC-CHEV	Water	09/11/15 08:50	09/11/15 14:10
580-53243-3	Trip Blank	Water	09/11/15 00:00	09/11/15 14:10
580-53243-4	CR-30A-SC-CHEV	Water	09/11/15 11:10	09/11/15 14:10

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TestAmerica Seattle

# TestAmerica Portland

941 N Kinnibis Avenue

Beaverton, OR 97008  
Phone: 503.906.9200 Fax:



## Chain of Custody Record

090103

**TestAmerica**

THE LEADER IN ENVIRONMENTAL TESTING  
TestAmerica Laboratories, Inc.

TAL-8210 (0713)

Client Contact		580-53243 Chain of Custody		DW <input type="checkbox"/> NPDES <input type="checkbox"/> RCRA <input type="checkbox"/> Other:	Site Contact: <b>BRIAN FLEMISTER</b>	Date: <b>9/11/15</b>	COC No:
Company Name: <b>ARCADIS</b>		Tel/Fax: <b>503.220.8201 x1114</b>		Lab Contact: <b>SARAH MURPHY</b>		Carrier: <b>14105</b>	<b>1</b> of <b>1</b> COCs
Address: <b>111 SW COLUMBIA ST STE 670</b>		Analysis Turnaround Time					Sampler: <b>MA/HAD</b>
City/State/Zip: <b>PORTLAND, OR 97201</b>		<input type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS					For Lab Use Only:
Phone: <b>503.220.8201</b>		TAT if different from Below					Walk-in Client:
Fax:		<input checked="" type="checkbox"/> 2 weeks					Lab Sampling:
Project Name: <b>3Q 2015 WILLBELLIE GWM</b>		<input type="checkbox"/> 1 week					Job / SDG No.:
Site: <b>1001868</b>		<input type="checkbox"/> 2 days					
PO# <b>B0045452, D018, D0477</b>		<input type="checkbox"/> 1 day					
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample (Y/N) Perform MS / MSD (Y/N)
<b>CR-31B-SC-CHEV</b>		9/11/15	09:30	G	W	11	<b>BTEX/MTBE</b> <b>NAPTH-GX</b> <b>PAH (Fluorene)</b> * <b>TOTAL METALS *</b> <b>CHLORIDE</b> <b>BC</b> <b>IC/ICR/CY (Lanthan)</b>
<b>CR-31A-SC-CHEV</b>		9/11/15	08:50	G	W	11	<b>X X X X X</b>
<b>TRIP BLANK</b>		-	-	-	W	1	
<b>CR-30A-SC-CHEV</b>		9/11/15	11:10	G	W	11	<b>X X X X X</b>
Sample Specific Notes:  <b>Dissolved metals field filtered</b> <b>Dissolved metals field filtered</b> <b>Dissolved metals field filtered</b>							
Preservation Used: 1=Ice, 2=HCl, 3=H2SO4, 4=HNO3, 5=NaOH, 6=Other							
Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.							
<input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown				Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)  <input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Disposal by Lab <input type="checkbox"/> Archive for _____ Months			
Special Instructions/QC Requirements & Comments: <b>SEND TO BRIAN.FLEMISTER@ARCADIS-US.COM AND BRIAN.MURPHY@ARCADIS-US.COM</b>							
Custody Seals Intact: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Custody Seal No.:		Cooler Temp. (°C): Obs'd: _____		Corr'd: _____	Therm ID No.: _____
Relinquished by: <i>Meg Armstrong</i>		Company: <b>ARCADIS</b>		Date/Time: <b>9/11/15 1:37</b>	Received by: <i>Arianne</i>	Company: <b>M.E.</b>	Date/Time: <b>9/11/15 1337</b>
Relinquished by: <i>Barbara</i>		Company: <b>M.E.</b>		Date/Time: <b>9/11/15</b>	Received by: <i>M.</i>	Company: <b>TFI</b>	Date/Time: <b>9/11/15 @ 1410</b>
Relinquished by: <i>Barbara</i>		Company: _____		Date/Time: _____	Received in Laboratory by: _____	Company: _____	Date/Time: _____

3.7, 14, 3.0, 29, 2.0, 14/G-L  
10 9 8 7 6 5 4 3 2 1

## Login Sample Receipt Checklist

Client: ARCADIS U.S. Inc

Job Number: 580-53243-1

SDG Number:

**Login Number: 53243**

**List Source: TestAmerica Seattle**

**List Number: 1**

**Creator: Lehman, Clarissa A**

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Seattle

5755 8th Street East

Tacoma, WA 98424

Tel: (253)922-2310

TestAmerica Job ID: 580-53289-1

Client Project/Site: 3Q2015 Willbridge GWM  
B0045452.0018.0042

For:

ARCADIS U.S. Inc  
111 SW Columbia Street  
Suite 670  
Portland, Oregon 97201

Attn: Brian Marcum

Sarah Murphy

Authorized for release by:

10/30/2015 2:12:15 PM

Sarah Murphy, Project Manager I

(253)922-2310

[sarah.murphy@testamericainc.com](mailto:sarah.murphy@testamericainc.com)

### LINKS

Review your project  
results through

Total Access

Have a Question?

Ask  
The  
Expert

Visit us at:

[www.testamericainc.com](http://www.testamericainc.com)

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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# Case Narrative

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53289-1

## Job ID: 580-53289-1

### Laboratory: TestAmerica Seattle

#### Narrative

#### Job Narrative 580-53289-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 9/14/2015 1:30 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 2.7° C.

#### GC/MS VOA

Method(s) 8260B: The surrogate recovery for the blank associated with batch 201735 was outside the upper control limits. All associated sample surrogates fell within acceptance criteria; therefore, the data have been reported.

8260 analysis was canceled for sample 580-53289-1 (Trip Blanks) as there was only enough volume remaining for NWTPH-Gx.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### GC/MS Semi VOA

Method(s) 8270C SIM: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch (LCSD 580-201093/3-A) recovered outside control limits for the following analytes: Benzo[g,h,i]perylene and Benzo[a]pyrene.

Method(s) 8270C SIM: The following analyte recovered outside control limits for the LCS/LCSD associated with preparation batch 580-201093 and analytical batch 580-202181: Anthracene (both LCSD and LCSD), Benzo[a]pyrene (both LCS and LCSD), and Benzo[g,h,i]perylene(LCSD only). These analytes were outside the Marginal Exceedance Limits and were indicative of a systematic problem; therefore, re-extraction and/or re-analysis was performed. The re-extraction yielded improved results, however it was out of hold. Therefore, both sets of data have been qualified and reported: CR-27C-SC-CHEV (580-53289-2) and CR-26-SC-CHEV (580-53289-4).

Method(s) 8270C SIM: The following sample was diluted to bring the concentration of target analytes within the calibration range: CR-27C-SC-CHEV (580-53289-2) at 10.0. Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### GC Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Organic Prep

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Definitions/Glossary

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53289-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits

### GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
*	RPD of the LCS and LCSD exceeds the control limits
H	Sample was prepped or analyzed beyond the specified holding time

### Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

## Glossary

**Abbreviation** These commonly used abbreviations may or may not be present in this report.

✉	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

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# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53289-1

## Client Sample ID: TRIP BLANKS

Date Collected: 09/14/15 00:00

Date Received: 09/14/15 13:30

## Lab Sample ID: 580-53289-1

Matrix: Water

### Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050		mg/L			09/23/15 20:01	1
<b>Surrogate</b>									
	%Recovery	Qualifier		Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91			50 - 150				09/23/15 20:01	1
Trifluorotoluene (Surr)	111			50 - 150				09/23/15 20:01	1

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53289-1

**Client Sample ID: CR-27C-SC-CHEV**

**Lab Sample ID: 580-53289-2**

**Matrix: Water**

Date Collected: 09/14/15 10:15

Date Received: 09/14/15 13:30

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			09/25/15 18:06	1
Ethylbenzene	ND		3.0		ug/L			09/25/15 18:06	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/25/15 18:06	1
m-Xylene & p-Xylene	ND		3.0		ug/L			09/25/15 18:06	1
o-Xylene	ND		2.0		ug/L			09/25/15 18:06	1
Toluene	ND		2.0		ug/L			09/25/15 18:06	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	103			75 - 120				09/25/15 18:06	1
Dibromofluoromethane (Surr)	103			85 - 115				09/25/15 18:06	1
1,2-Dichloroethane-d4 (Surr)	104			70 - 120				09/25/15 18:06	1
Toluene-d8 (Surr)	101			85 - 120				09/25/15 18:06	1
Trifluorotoluene (Surr)	101			70 - 136				09/25/15 18:06	1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.0095		ug/L		09/17/15 17:01	09/30/15 23:13	1
2-Methylnaphthalene	ND		0.012		ug/L		09/17/15 17:01	09/30/15 23:13	1
1-Methylnaphthalene	ND		0.0095		ug/L		09/17/15 17:01	09/30/15 23:13	1
Phenanthrene	ND		0.095		ug/L		09/17/15 17:01	09/30/15 23:13	1
Anthracene	ND *		0.024		ug/L		09/17/15 17:01	09/30/15 23:13	1
Fluoranthene	ND		0.048		ug/L		09/17/15 17:01	09/30/15 23:13	1
Pyrene	ND		0.048		ug/L		09/17/15 17:01	09/30/15 23:13	1
<b>Benzo[a]anthracene</b>	<b>0.021</b>		0.0095		ug/L		09/17/15 17:01	09/30/15 23:13	1
<b>Chrysene</b>	<b>0.028</b>		0.0095		ug/L		09/17/15 17:01	09/30/15 23:13	1
<b>Benzo[a]pyrene</b>	<b>0.024 *</b>		0.0095		ug/L		09/17/15 17:01	09/30/15 23:13	1
<b>Indeno[1,2,3-cd]pyrene</b>	<b>0.012</b>		0.0095		ug/L		09/17/15 17:01	09/30/15 23:13	1
Dibenz(a,h)anthracene	ND		0.0095		ug/L		09/17/15 17:01	09/30/15 23:13	1
<b>Benzo[g,h,i]perylene</b>	<b>0.012 *</b>		0.0095		ug/L		09/17/15 17:01	09/30/15 23:13	1
<b>Benzo[b]fluoranthene</b>	<b>0.069</b>		0.0095		ug/L		09/17/15 17:01	09/30/15 23:13	1
<b>Benzo[k]fluoranthene</b>	<b>0.023</b>		0.0095		ug/L		09/17/15 17:01	09/30/15 23:13	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Terphenyl-d14	80			64 - 150			09/17/15 17:01	09/30/15 23:13	1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	ND		0.095		ug/L		09/17/15 17:01	10/24/15 17:50	10
Acenaphthene	ND		0.095		ug/L		09/17/15 17:01	10/24/15 17:50	10
Fluorene	ND		0.095		ug/L		09/17/15 17:01	10/24/15 17:50	10
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Terphenyl-d14	86			64 - 150			09/17/15 17:01	10/24/15 17:50	10

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND H		0.19		ug/L		10/10/15 11:07	10/23/15 17:17	10
2-Methylnaphthalene	ND H		0.25		ug/L		10/10/15 11:07	10/23/15 17:17	10
1-Methylnaphthalene	ND H		0.19		ug/L		10/10/15 11:07	10/23/15 17:17	10
Acenaphthylene	ND H		0.19		ug/L		10/10/15 11:07	10/23/15 17:17	10
Acenaphthene	ND H		0.19		ug/L		10/10/15 11:07	10/23/15 17:17	10

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53289-1

**Client Sample ID: CR-27C-SC-CHEV**

Date Collected: 09/14/15 10:15

Date Received: 09/14/15 13:30

**Lab Sample ID: 580-53289-2**

Matrix: Water

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) - RE (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	ND	H	0.19		ug/L		10/10/15 11:07	10/23/15 17:17	10
Phenanthrene	ND	H	1.9		ug/L		10/10/15 11:07	10/23/15 17:17	10
Anthracene	ND	H	0.48		ug/L		10/10/15 11:07	10/23/15 17:17	10
Fluoranthene	ND	H	0.97		ug/L		10/10/15 11:07	10/23/15 17:17	10
Pyrene	ND	H	0.97		ug/L		10/10/15 11:07	10/23/15 17:17	10
Benzo[a]anthracene	ND	H	0.19		ug/L		10/10/15 11:07	10/23/15 17:17	10
Chrysene	ND	H	0.19		ug/L		10/10/15 11:07	10/23/15 17:17	10
Benzo[a]pyrene	ND	H	0.19		ug/L		10/10/15 11:07	10/23/15 17:17	10
Indeno[1,2,3-cd]pyrene	ND	H	0.19		ug/L		10/10/15 11:07	10/23/15 17:17	10
Dibenz(a,h)anthracene	ND	H	0.19		ug/L		10/10/15 11:07	10/23/15 17:17	10
Benzo[g,h,i]perylene	ND	H	0.19		ug/L		10/10/15 11:07	10/23/15 17:17	10
Benzo[b]fluoranthene	ND	H	0.19		ug/L		10/10/15 11:07	10/23/15 17:17	10
Benzo[k]fluoranthene	ND	H	0.19		ug/L		10/10/15 11:07	10/23/15 17:17	10
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Terphenyl-d14	90		64 - 150				10/10/15 11:07	10/23/15 17:17	10

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050		mg/L			09/24/15 04:51	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	91		50 - 150					09/24/15 04:51	1
Trifluorotoluene (Surr)	101		50 - 150					09/24/15 04:51	1

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	1.2		0.12		mg/L		09/23/15 09:06	09/24/15 00:05	1
Motor Oil (>C24-C36)	0.41		0.27		mg/L		09/23/15 09:06	09/24/15 00:05	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
o-Terphenyl	77		50 - 150				09/23/15 09:06	09/24/15 00:05	1

## Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0085		0.0050		mg/L		09/28/15 13:00	09/28/15 23:49	5
Barium	0.15		0.0060		mg/L		09/28/15 13:00	09/28/15 23:49	5
Cadmium	ND		0.0020		mg/L		09/28/15 13:00	09/28/15 23:49	5
Chromium	0.0076		0.0020		mg/L		09/28/15 13:00	09/28/15 23:49	5
Copper	ND		0.010		mg/L		09/28/15 13:00	09/28/15 23:49	5
Lead	0.0035		0.0020		mg/L		09/28/15 13:00	09/28/15 23:49	5
Manganese	0.48		0.010		mg/L		09/28/15 13:00	09/28/15 23:49	5
Selenium	ND		0.0050		mg/L		09/28/15 13:00	09/28/15 23:49	5
Silver	ND		0.0020		mg/L		09/28/15 13:00	09/28/15 23:49	5
Zinc	0.035		0.035		mg/L		09/28/15 13:00	09/28/15 23:49	5

## Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0080		0.0050		mg/L		09/24/15 06:48	09/24/15 14:37	5
Barium	0.11		0.0060		mg/L		09/24/15 06:48	09/24/15 14:37	5
Cadmium	ND		0.0020		mg/L		09/24/15 06:48	09/24/15 14:37	5

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53289-1

**Client Sample ID: CR-27C-SC-CHEV**

Date Collected: 09/14/15 10:15

Date Received: 09/14/15 13:30

**Lab Sample ID: 580-53289-2**

Matrix: Water

**Method: 6020 - Metals (ICP/MS) - Dissolved (Continued)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chromium	ND		0.0020		mg/L		09/24/15 06:48	09/24/15 14:37	5
Copper	ND		0.010		mg/L		09/24/15 06:48	09/24/15 14:37	5
Lead	ND		0.0020		mg/L		09/24/15 06:48	09/24/15 14:37	5
Manganese	0.36		0.010		mg/L		09/24/15 06:48	09/24/15 14:37	5
Selenium	ND		0.0050		mg/L		09/24/15 06:48	09/24/15 14:37	5
Silver	ND		0.0020		mg/L		09/24/15 06:48	09/24/15 14:37	5
Zinc	ND		0.035		mg/L		09/24/15 06:48	09/24/15 14:37	5

**Method: 7470A - Mercury (CVAA)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		09/29/15 06:53	09/29/15 11:52	1

**Method: 7470A - Mercury (CVAA) - Dissolved**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		09/29/15 06:53	09/29/15 11:54	1

**General Chemistry**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	4.2		1.0		mg/L		09/24/15 00:08		1

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53289-1

**Client Sample ID: BD-SC-CHEV-1**

Date Collected: 09/14/15 00:00

Date Received: 09/14/15 13:30

**Lab Sample ID: 580-53289-3**

Matrix: Water

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			09/25/15 18:34	1
Ethylbenzene	ND		3.0		ug/L			09/25/15 18:34	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/25/15 18:34	1
m-Xylene & p-Xylene	ND		3.0		ug/L			09/25/15 18:34	1
o-Xylene	ND		2.0		ug/L			09/25/15 18:34	1
Toluene	ND		2.0		ug/L			09/25/15 18:34	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	101			75 - 120				09/25/15 18:34	1
Dibromofluoromethane (Surr)	101			85 - 115				09/25/15 18:34	1
1,2-Dichloroethane-d4 (Surr)	106			70 - 120				09/25/15 18:34	1
Toluene-d8 (Surr)	102			85 - 120				09/25/15 18:34	1
Trifluorotoluene (Surr)	104			70 - 136				09/25/15 18:34	1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.010		ug/L		09/17/15 17:01	09/30/15 23:36	1
2-Methylnaphthalene	ND		0.013		ug/L		09/17/15 17:01	09/30/15 23:36	1
1-Methylnaphthalene	ND		0.010		ug/L		09/17/15 17:01	09/30/15 23:36	1
Acenaphthylene	ND		0.010		ug/L		09/17/15 17:01	09/30/15 23:36	1
Acenaphthene	ND		0.010		ug/L		09/17/15 17:01	09/30/15 23:36	1
Fluorene	ND		0.010		ug/L		09/17/15 17:01	09/30/15 23:36	1
Phenanthrene	ND		0.10		ug/L		09/17/15 17:01	09/30/15 23:36	1
Anthracene	ND *		0.026		ug/L		09/17/15 17:01	09/30/15 23:36	1
Fluoranthene	ND		0.052		ug/L		09/17/15 17:01	09/30/15 23:36	1
Pyrene	ND		0.052		ug/L		09/17/15 17:01	09/30/15 23:36	1
Benzo[a]anthracene	ND		0.010		ug/L		09/17/15 17:01	09/30/15 23:36	1
Chrysene	ND		0.010		ug/L		09/17/15 17:01	09/30/15 23:36	1
Benzo[a]pyrene	ND *		0.010		ug/L		09/17/15 17:01	09/30/15 23:36	1
Indeno[1,2,3-cd]pyrene	ND		0.010		ug/L		09/17/15 17:01	09/30/15 23:36	1
Dibenz(a,h)anthracene	ND		0.010		ug/L		09/17/15 17:01	09/30/15 23:36	1
Benzo[g,h,i]perylene	ND *		0.010		ug/L		09/17/15 17:01	09/30/15 23:36	1
Benzo[b]fluoranthene	ND		0.010		ug/L		09/17/15 17:01	09/30/15 23:36	1
Benzo[k]fluoranthene	ND		0.010		ug/L		09/17/15 17:01	09/30/15 23:36	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Terphenyl-d14	96			64 - 150				09/17/15 17:01	09/30/15 23:36

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050		mg/L			09/24/15 05:24	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	93			50 - 150				09/24/15 05:24	1
Trifluorotoluene (Surr)	102			50 - 150				09/24/15 05:24	1

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	3.0		0.10		mg/L		09/23/15 09:06	09/24/15 00:23	1
Motor Oil (>C24-C36)	0.46		0.24		mg/L		09/23/15 09:06	09/24/15 00:23	1

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53289-1

**Client Sample ID: BD-SC-CHEV-1**

**Date Collected: 09/14/15 00:00**

**Date Received: 09/14/15 13:30**

**Lab Sample ID: 580-53289-3**

**Matrix: Water**

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o-Terphenyl</i>	67		50 - 150	09/23/15 09:06	09/24/15 00:23	1

## Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.028		0.0050		mg/L		09/28/15 13:00	09/29/15 00:03	5
Barium	0.17		0.0060		mg/L		09/28/15 13:00	09/29/15 00:03	5
Cadmium	ND		0.0020		mg/L		09/28/15 13:00	09/29/15 00:03	5
Chromium	0.0033		0.0020		mg/L		09/28/15 13:00	09/29/15 00:03	5
Copper	ND		0.010		mg/L		09/28/15 13:00	09/29/15 00:03	5
Lead	ND		0.0020		mg/L		09/28/15 13:00	09/29/15 00:03	5
Manganese	5.8		0.010		mg/L		09/28/15 13:00	09/29/15 00:03	5
Selenium	ND		0.0050		mg/L		09/28/15 13:00	09/29/15 00:03	5
Silver	ND		0.0020		mg/L		09/28/15 13:00	09/29/15 00:03	5
Zinc	ND		0.035		mg/L		09/28/15 13:00	09/29/15 00:03	5

## Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		09/29/15 06:53	09/29/15 11:57	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	9.7		1.0		mg/L		09/25/15 02:11		1

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53289-1

**Client Sample ID: CR-26-SC-CHEV**

Date Collected: 09/14/15 09:15

Date Received: 09/14/15 13:30

**Lab Sample ID: 580-53289-4**

Matrix: Water

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			09/25/15 19:07	1
Ethylbenzene	ND		3.0		ug/L			09/25/15 19:07	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/25/15 19:07	1
m-Xylene & p-Xylene	ND		3.0		ug/L			09/25/15 19:07	1
o-Xylene	ND		2.0		ug/L			09/25/15 19:07	1
Toluene	ND		2.0		ug/L			09/25/15 19:07	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	100			75 - 120				09/25/15 19:07	1
Dibromofluoromethane (Surr)	103			85 - 115				09/25/15 19:07	1
1,2-Dichloroethane-d4 (Surr)	107			70 - 120				09/25/15 19:07	1
Toluene-d8 (Surr)	104			85 - 120				09/25/15 19:07	1
Trifluorotoluene (Surr)	103			70 - 136				09/25/15 19:07	1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac	
Naphthalene	ND		0.0096		ug/L		09/17/15 17:01	09/30/15 23:59	1	
2-Methylnaphthalene	ND		0.013		ug/L		09/17/15 17:01	09/30/15 23:59	1	
1-Methylnaphthalene	ND		0.0096		ug/L		09/17/15 17:01	09/30/15 23:59	1	
Acenaphthylene	ND		0.0096		ug/L		09/17/15 17:01	09/30/15 23:59	1	
<b>Acenaphthene</b>	<b>0.014</b>		0.0096		ug/L		09/17/15 17:01	09/30/15 23:59	1	
<b>Fluorene</b>	<b>0.016</b>		0.0096		ug/L		09/17/15 17:01	09/30/15 23:59	1	
Phenanthrene	ND		0.096		ug/L		09/17/15 17:01	09/30/15 23:59	1	
Anthracene	ND *		0.024		ug/L		09/17/15 17:01	09/30/15 23:59	1	
Fluoranthene	ND		0.048		ug/L		09/17/15 17:01	09/30/15 23:59	1	
Pyrene	ND		0.048		ug/L		09/17/15 17:01	09/30/15 23:59	1	
<b>Benzo[a]anthracene</b>	<b>0.028</b>		0.0096		ug/L		09/17/15 17:01	09/30/15 23:59	1	
<b>Chrysene</b>	<b>0.018</b>		0.0096		ug/L		09/17/15 17:01	09/30/15 23:59	1	
Benzo[a]pyrene	ND *		0.0096		ug/L		09/17/15 17:01	09/30/15 23:59	1	
Indeno[1,2,3-cd]pyrene	ND		0.0096		ug/L		09/17/15 17:01	09/30/15 23:59	1	
Dibenz(a,h)anthracene	ND		0.0096		ug/L		09/17/15 17:01	09/30/15 23:59	1	
Benzo[g,h,i]perylene	ND *		0.0096		ug/L		09/17/15 17:01	09/30/15 23:59	1	
<b>Benzo[b]fluoranthene</b>	<b>0.051</b>		0.0096		ug/L		09/17/15 17:01	09/30/15 23:59	1	
<b>Benzo[k]fluoranthene</b>	<b>0.013</b>		0.0096		ug/L		09/17/15 17:01	09/30/15 23:59	1	
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>	
Terphenyl-d14	79			64 - 150				09/17/15 17:01	09/30/15 23:59	1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) - RE

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND H		0.50		ug/L		10/10/15 11:07	10/23/15 17:40	50
2-Methylnaphthalene	ND H		0.65		ug/L		10/10/15 11:07	10/23/15 17:40	50
1-Methylnaphthalene	ND H		0.50		ug/L		10/10/15 11:07	10/23/15 17:40	50
Acenaphthylene	ND H		0.50		ug/L		10/10/15 11:07	10/23/15 17:40	50
Acenaphthene	ND H		0.50		ug/L		10/10/15 11:07	10/23/15 17:40	50
Fluorene	ND H		0.50		ug/L		10/10/15 11:07	10/23/15 17:40	50
Phenanthrene	ND H		5.0		ug/L		10/10/15 11:07	10/23/15 17:40	50
Anthracene	ND H		1.3		ug/L		10/10/15 11:07	10/23/15 17:40	50
Fluoranthene	ND H		2.5		ug/L		10/10/15 11:07	10/23/15 17:40	50
Pyrene	ND H		2.5		ug/L		10/10/15 11:07	10/23/15 17:40	50

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53289-1

**Client Sample ID: CR-26-SC-CHEV**

**Lab Sample ID: 580-53289-4**

**Matrix: Water**

Date Collected: 09/14/15 09:15

Date Received: 09/14/15 13:30

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) - RE (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	ND	H	0.50		ug/L		10/10/15 11:07	10/23/15 17:40	50
Chrysene	ND	H	0.50		ug/L		10/10/15 11:07	10/23/15 17:40	50
Benzo[a]pyrene	ND	H	0.50		ug/L		10/10/15 11:07	10/23/15 17:40	50
Indeno[1,2,3-cd]pyrene	ND	H	0.50		ug/L		10/10/15 11:07	10/23/15 17:40	50
Dibenz(a,h)anthracene	ND	H	0.50		ug/L		10/10/15 11:07	10/23/15 17:40	50
Benzo[g,h,i]perylene	ND	H	0.50		ug/L		10/10/15 11:07	10/23/15 17:40	50
Benzo[b]fluoranthene	ND	H	0.50		ug/L		10/10/15 11:07	10/23/15 17:40	50
Benzo[k]fluoranthene	ND	H	0.50		ug/L		10/10/15 11:07	10/23/15 17:40	50
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Terphenyl-d14	85		64 - 150				10/10/15 11:07	10/23/15 17:40	50

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050		mg/L			09/24/15 05:57	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	92		50 - 150					09/24/15 05:57	1
Trifluorotoluene (Surr)	95		50 - 150					09/24/15 05:57	1

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	10		0.12		mg/L		09/23/15 09:06	09/24/15 00:41	1
Motor Oil (>C24-C36)	1.4		0.27		mg/L		09/23/15 09:06	09/24/15 00:41	1
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
o-Terphenyl	78		50 - 150				09/23/15 09:06	09/24/15 00:41	1

## Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.015		0.0050		mg/L		09/28/15 13:00	09/29/15 00:07	5
Barium	0.14		0.0060		mg/L		09/28/15 13:00	09/29/15 00:07	5
Cadmium	ND		0.0020		mg/L		09/28/15 13:00	09/29/15 00:07	5
Chromium	ND		0.0020		mg/L		09/28/15 13:00	09/29/15 00:07	5
Copper	ND		0.010		mg/L		09/28/15 13:00	09/29/15 00:07	5
Lead	ND		0.0020		mg/L		09/28/15 13:00	09/29/15 00:07	5
Manganese	5.0		0.010		mg/L		09/28/15 13:00	09/29/15 00:07	5
Selenium	ND		0.0050		mg/L		09/28/15 13:00	09/29/15 00:07	5
Silver	ND		0.0020		mg/L		09/28/15 13:00	09/29/15 00:07	5
Zinc	ND		0.035		mg/L		09/28/15 13:00	09/29/15 00:07	5

## Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		09/29/15 06:53	09/29/15 11:59	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	12		1.0		mg/L			09/24/15 00:08	1

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53289-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 580-201735/4**

**Matrix: Water**

**Analysis Batch: 201735**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		2.0		ug/L			09/25/15 13:24	1
Ethylbenzene	ND		3.0		ug/L			09/25/15 13:24	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/25/15 13:24	1
m-Xylene & p-Xylene	ND		3.0		ug/L			09/25/15 13:24	1
o-Xylene	ND		2.0		ug/L			09/25/15 13:24	1
Toluene	ND		2.0		ug/L			09/25/15 13:24	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	107		75 - 120		09/25/15 13:24	1
Dibromofluoromethane (Surr)	112		85 - 115		09/25/15 13:24	1
1,2-Dichloroethane-d4 (Surr)	123	X	70 - 120		09/25/15 13:24	1
Toluene-d8 (Surr)	107		85 - 120		09/25/15 13:24	1
Trifluorotoluene (Surr)	102		70 - 136		09/25/15 13:24	1

**Lab Sample ID: LCS 580-201735/5**

**Matrix: Water**

**Analysis Batch: 201735**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike	LCS	LCS	D	%Rec	%Rec.	Limits
	Added	Result	Qualifier				
Benzene	20.1	21.1		ug/L	105	80 - 120	
Ethylbenzene	20.1	22.6		ug/L	112	75 - 125	
Methyl tert-butyl ether	20.0	23.8		ug/L	119	65 - 125	
m-Xylene & p-Xylene	20.0	22.9		ug/L	114	75 - 130	
o-Xylene	20.0	23.2		ug/L	116	80 - 120	
Toluene	20.0	21.1		ug/L	105	75 - 120	

Surrogate	LCSD	LCSD	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	99		75 - 120			
Dibromofluoromethane (Surr)	110		85 - 115			
1,2-Dichloroethane-d4 (Surr)	117		70 - 120			
Toluene-d8 (Surr)	100		85 - 120			
Trifluorotoluene (Surr)	101		70 - 136			

**Lab Sample ID: LCSD 580-201735/6**

**Matrix: Water**

**Analysis Batch: 201735**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike	LCSD	LCSD	D	%Rec	%Rec.	RPD	RPD Limit
	Added	Result	Qualifier					
Benzene	20.1	21.4		ug/L	107	80 - 120	1	30
Ethylbenzene	20.1	23.3		ug/L	116	75 - 125	3	30
Methyl tert-butyl ether	20.0	22.4		ug/L	112	65 - 125	6	30
m-Xylene & p-Xylene	20.0	23.4		ug/L	117	75 - 130	2	30
o-Xylene	20.0	23.9		ug/L	119	80 - 120	3	30
Toluene	20.0	21.6		ug/L	108	75 - 120	2	30

Surrogate	LCSD	LCSD	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	98		75 - 120			

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53289-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID:** LCSD 580-201735/6

**Matrix:** Water

**Analysis Batch:** 201735

**Client Sample ID:** Lab Control Sample Dup

**Prep Type:** Total/NA

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Dibromofluoromethane (Surr)	109		85 - 115
1,2-Dichloroethane-d4 (Surr)	111		70 - 120
Toluene-d8 (Surr)	98		85 - 120
Trifluorotoluene (Surr)	99		70 - 136

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

**Lab Sample ID:** MB 580-201093/1-A

**Matrix:** Water

**Analysis Batch:** 202181

**Client Sample ID:** Method Blank

**Prep Type:** Total/NA

**Prep Batch:** 201093

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	MB Result	MB Qualifier	RL	MDL	Unit		Prepared	Analyzed	
Naphthalene	ND		0.010		ug/L	09/17/15 17:01	09/30/15 18:36		1
2-Methylnaphthalene	ND		0.013		ug/L	09/17/15 17:01	09/30/15 18:36		1
1-Methylnaphthalene	ND		0.010		ug/L	09/17/15 17:01	09/30/15 18:36		1
Acenaphthylene	ND		0.010		ug/L	09/17/15 17:01	09/30/15 18:36		1
Acenaphthene	ND		0.010		ug/L	09/17/15 17:01	09/30/15 18:36		1
Fluorene	ND		0.010		ug/L	09/17/15 17:01	09/30/15 18:36		1
Phenanthrene	ND		0.10		ug/L	09/17/15 17:01	09/30/15 18:36		1
Anthracene	ND		0.025		ug/L	09/17/15 17:01	09/30/15 18:36		1
Fluoranthene	ND		0.050		ug/L	09/17/15 17:01	09/30/15 18:36		1
Pyrene	ND		0.050		ug/L	09/17/15 17:01	09/30/15 18:36		1
Benzo[a]anthracene	ND		0.010		ug/L	09/17/15 17:01	09/30/15 18:36		1
Chrysene	ND		0.010		ug/L	09/17/15 17:01	09/30/15 18:36		1
Benzo[a]pyrene	ND		0.010		ug/L	09/17/15 17:01	09/30/15 18:36		1
Indeno[1,2,3-cd]pyrene	ND		0.010		ug/L	09/17/15 17:01	09/30/15 18:36		1
Dibenz(a,h)anthracene	ND		0.010		ug/L	09/17/15 17:01	09/30/15 18:36		1
Benzo[g,h,i]perylene	ND		0.010		ug/L	09/17/15 17:01	09/30/15 18:36		1
Benzo[b]fluoranthene	ND		0.010		ug/L	09/17/15 17:01	09/30/15 18:36		1
Benzo[k]fluoranthene	ND		0.010		ug/L	09/17/15 17:01	09/30/15 18:36		1
Surrogate	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Terphenyl-d14	102			64 - 150			09/17/15 17:01	09/30/15 18:36	1

**Lab Sample ID:** LCS 580-201093/2-A

**Matrix:** Water

**Analysis Batch:** 202181

**Client Sample ID:** Lab Control Sample

**Prep Type:** Total/NA

**Prep Batch:** 201093

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits	%Rec.
	Added	Result	Qualifier	Unit				
Naphthalene	1.00	0.776		ug/L	78	54 - 106		
2-Methylnaphthalene	1.00	0.823		ug/L	82	54 - 114		
1-Methylnaphthalene	1.00	0.818		ug/L	82	57 - 115		
Acenaphthylene	1.00	0.344		ug/L	34	30 - 127		
Acenaphthene	1.00	0.744		ug/L	74	54 - 109		
Fluorene	1.00	0.831		ug/L	83	50 - 130		
Phenanthrene	1.00	0.863		ug/L	86	53 - 115		
Anthracene	1.00	0.223 *		ug/L	22	30 - 130		

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53289-1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

**Lab Sample ID: LCS 580-201093/2-A**

**Matrix: Water**

**Analysis Batch: 202181**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 201093**

**%Rec.**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Fluoranthene	1.00	0.777		ug/L	78	58 - 128	
Pyrene	1.00	0.697		ug/L	70	53 - 121	
Benzo[a]anthracene	1.00	0.582		ug/L	58	35 - 125	
Chrysene	1.00	0.833		ug/L	83	57 - 120	
Benzo[a]pyrene	1.00	0.100	*	ug/L	10	30 - 127	
Indeno[1,2,3-cd]pyrene	1.00	0.933		ug/L	93	53 - 131	
Dibenz(a,h)anthracene	1.00	1.07		ug/L	107	60 - 136	
Benzo[g,h,i]perylene	1.00	0.896		ug/L	90	51 - 128	
Benzo[b]fluoranthene	1.00	0.993		ug/L	99	59 - 126	
Benzo[k]fluoranthene	1.00	0.908		ug/L	91	49 - 136	
<b>Surrogate</b>		<b>LCS</b>	<b>LCS</b>				
<i>Terphenyl-d14</i>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			
		91		64 - 150			

**Lab Sample ID: LCSD 580-201093/3-A**

**Matrix: Water**

**Analysis Batch: 202181**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 201093**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Naphthalene	1.00	0.758		ug/L	76	54 - 106		2	20
2-Methylnaphthalene	1.00	0.802		ug/L	80	54 - 114		3	20
1-Methylnaphthalene	1.00	0.799		ug/L	80	57 - 115		2	20
Acenaphthylene	1.00	0.299		ug/L	30	30 - 127		14	20
Acenaphthene	1.00	0.705		ug/L	70	54 - 109		5	20
Fluorene	1.00	0.812		ug/L	81	50 - 130		2	20
Phenanthrene	1.00	0.829		ug/L	83	53 - 115		4	20
Anthracene	1.00	0.256	*	ug/L	26	30 - 130		14	20
Fluoranthene	1.00	0.737		ug/L	74	58 - 128		5	20
Pyrene	1.00	0.633		ug/L	63	53 - 121		10	20
Benzo[a]anthracene	1.00	0.552		ug/L	55	35 - 125		5	20
Chrysene	1.00	0.800		ug/L	80	57 - 120		4	20
Benzo[a]pyrene	1.00	ND	*	ug/L	0	30 - 127		200	20
Indeno[1,2,3-cd]pyrene	1.00	0.779		ug/L	78	53 - 131		18	20
Dibenz(a,h)anthracene	1.00	0.930		ug/L	93	60 - 136		14	20
Benzo[g,h,i]perylene	1.00	0.442	*	ug/L	44	51 - 128		68	20
Benzo[b]fluoranthene	1.00	0.893		ug/L	89	59 - 126		11	20
Benzo[k]fluoranthene	1.00	0.795		ug/L	79	49 - 136		13	20
<b>Surrogate</b>		<b>LCSD</b>	<b>LCSD</b>						
<i>Terphenyl-d14</i>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>					
		87		64 - 150					

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53289-1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) - RE

**Lab Sample ID: MB 580-202974/1-A**

**Matrix: Water**

**Analysis Batch: 204037**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 202974**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene - RE	ND		0.010		ug/L				1
2-Methylnaphthalene - RE	ND		0.013		ug/L	10/10/15 11:07	10/22/15 14:18		1
1-Methylnaphthalene - RE	ND		0.010		ug/L	10/10/15 11:07	10/22/15 14:18		1
Acenaphthylene - RE	ND		0.010		ug/L	10/10/15 11:07	10/22/15 14:18		1
Acenaphthene - RE	ND		0.010		ug/L	10/10/15 11:07	10/22/15 14:18		1
Fluorene - RE	ND		0.010		ug/L	10/10/15 11:07	10/22/15 14:18		1
Phenanthrene - RE	ND		0.10		ug/L	10/10/15 11:07	10/22/15 14:18		1
Anthracene - RE	ND		0.025		ug/L	10/10/15 11:07	10/22/15 14:18		1
Fluoranthene - RE	ND		0.050		ug/L	10/10/15 11:07	10/22/15 14:18		1
Pyrene - RE	ND		0.050		ug/L	10/10/15 11:07	10/22/15 14:18		1
Benzo[a]anthracene - RE	ND		0.010		ug/L	10/10/15 11:07	10/22/15 14:18		1
Chrysene - RE	ND		0.010		ug/L	10/10/15 11:07	10/22/15 14:18		1
Benzo[a]pyrene - RE	ND		0.010		ug/L	10/10/15 11:07	10/22/15 14:18		1
Indeno[1,2,3-cd]pyrene - RE	ND		0.010		ug/L	10/10/15 11:07	10/22/15 14:18		1
Dibenz(a,h)anthracene - RE	ND		0.010		ug/L	10/10/15 11:07	10/22/15 14:18		1
Benzo[g,h,i]perylene - RE	ND		0.010		ug/L	10/10/15 11:07	10/22/15 14:18		1
Benzo[b]fluoranthene - RE	ND		0.010		ug/L	10/10/15 11:07	10/22/15 14:18		1
Benzo[k]fluoranthene - RE	ND		0.010		ug/L	10/10/15 11:07	10/22/15 14:18		1
Surrogate	MB %Recovery	MB Qualifier	MB Limits				Prepared	Analyzed	Dil Fac
Terphenyl-d14 - RE	64		64 - 150				10/10/15 11:07	10/22/15 14:18	1

**Lab Sample ID: LCS 580-202974/2-A**

**Matrix: Water**

**Analysis Batch: 204037**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 202974**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	Limits
Naphthalene - RE	1.00	0.658		ug/L		66	54 - 106	
2-Methylnaphthalene - RE	1.00	0.685		ug/L		68	54 - 114	
1-Methylnaphthalene - RE	1.00	0.699		ug/L		70	57 - 115	
Acenaphthylene - RE	1.00	0.625		ug/L		63	30 - 127	
Acenaphthene - RE	1.00	0.652		ug/L		65	54 - 109	
Fluorene - RE	1.00	0.676		ug/L		68	50 - 130	
Phenanthrene - RE	1.00	0.740		ug/L		74	53 - 115	
Anthracene - RE	1.00	0.439		ug/L		44	30 - 130	
Fluoranthene - RE	1.00	0.685		ug/L		68	58 - 128	
Pyrene - RE	1.00	0.648		ug/L		65	53 - 121	
Benzo[a]anthracene - RE	1.00	0.629		ug/L		63	35 - 125	
Chrysene - RE	1.00	0.772		ug/L		77	57 - 120	
Benzo[a]pyrene - RE	1.00	0.471		ug/L		47	30 - 127	
Indeno[1,2,3-cd]pyrene - RE	1.00	0.892		ug/L		89	53 - 131	
Dibenz(a,h)anthracene - RE	1.00	0.941		ug/L		94	60 - 136	
Benzo[g,h,i]perylene - RE	1.00	0.861		ug/L		86	51 - 128	
Benzo[b]fluoranthene - RE	1.00	0.863		ug/L		86	59 - 126	
Benzo[k]fluoranthene - RE	1.00	0.885		ug/L		88	49 - 136	

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53289-1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) - RE (Continued)

**Lab Sample ID:** LCS 580-202974/2-A

**Matrix:** Water

**Analysis Batch:** 204037

**Client Sample ID:** Lab Control Sample

**Prep Type:** Total/NA

**Prep Batch:** 202974

Surrogate	LCS	LCS	
	%Recovery	Qualifier	Limits
Terphenyl-d14 - RE	74		64 - 150

**Lab Sample ID:** LCSD 580-202974/3-A

**Matrix:** Water

**Analysis Batch:** 204037

**Client Sample ID:** Lab Control Sample Dup

**Prep Type:** Total/NA

**Prep Batch:** 202974

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec.	RPD	Limit
Naphthalene - RE	1.00	0.724		ug/L	72	54 - 106	10	20
2-Methylnaphthalene - RE	1.00	0.747		ug/L	75	54 - 114	9	20
1-Methylnaphthalene - RE	1.00	0.775		ug/L	78	57 - 115	10	20
Acenaphthylene - RE	1.00	0.680		ug/L	68	30 - 127	8	20
Acenaphthene - RE	1.00	0.720		ug/L	72	54 - 109	10	20
Fluorene - RE	1.00	0.735		ug/L	74	50 - 130	8	20
Phenanthrene - RE	1.00	0.791		ug/L	79	53 - 115	7	20
Anthracene - RE	1.00	0.466		ug/L	47	30 - 130	6	20
Fluoranthene - RE	1.00	0.707		ug/L	71	58 - 128	3	20
Pyrene - RE	1.00	0.674		ug/L	67	53 - 121	4	20
Benzo[a]anthracene - RE	1.00	0.670		ug/L	67	35 - 125	6	20
Chrysene - RE	1.00	0.826		ug/L	83	57 - 120	7	20
Benzo[a]pyrene - RE	1.00	0.475		ug/L	47	30 - 127	1	20
Indeno[1,2,3-cd]pyrene - RE	1.00	0.962		ug/L	96	53 - 131	8	20
Dibenz(a,h)anthracene - RE	1.00	1.01		ug/L	101	60 - 136	7	20
Benzo[g,h,i]perylene - RE	1.00	0.922		ug/L	92	51 - 128	7	20
Benzo[b]fluoranthene - RE	1.00	0.925		ug/L	92	59 - 126	7	20
Benzo[k]fluoranthene - RE	1.00	0.922		ug/L	92	49 - 136	4	20

Surrogate	LCSD	LCSD	
	%Recovery	Qualifier	Limits
Terphenyl-d14 - RE	75		64 - 150

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

**Lab Sample ID:** MB 580-201547/5

**Matrix:** Water

**Analysis Batch:** 201547

**Client Sample ID:** Method Blank

**Prep Type:** Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050		mg/L			09/23/15 17:15	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92		50 - 150					09/23/15 17:15	1
Trifluorotoluene (Surr)	109		50 - 150					09/23/15 17:15	1

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53289-1

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC) (Continued)

**Lab Sample ID: LCS 580-201547/6**

**Matrix: Water**

**Analysis Batch: 201547**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.
Gasoline	1.16	1.09		mg/L		94	79 - 110
Surrogate	%Recovery	LCS Qualifier	Limits				Limits
4-Bromofluorobenzene (Surr)	99		50 - 150				
Trifluorotoluene (Surr)	113		50 - 150				

**Lab Sample ID: LCSD 580-201547/7**

**Matrix: Water**

**Analysis Batch: 201547**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.	RPD
Gasoline	1.16	1.06		mg/L		91	79 - 110	3
Surrogate	%Recovery	LCSD Qualifier	Limits				Limits	RPD
4-Bromofluorobenzene (Surr)	98		50 - 150					
Trifluorotoluene (Surr)	111		50 - 150					

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

**Lab Sample ID: MB 580-201493/1-A**

**Matrix: Water**

**Analysis Batch: 201519**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 201493**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.11		mg/L		09/23/15 09:06	09/23/15 22:53	1
Motor Oil (>C24-C36)	ND		0.25		mg/L		09/23/15 09:06	09/23/15 22:53	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
o-Terphenyl	54		50 - 150				09/23/15 09:06	09/23/15 22:53	1

**Lab Sample ID: LCS 580-201493/2-A**

**Matrix: Water**

**Analysis Batch: 201519**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 201493**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.
#2 Diesel (C10-C24)	0.500	0.470		mg/L		94	59 - 120
Motor Oil (>C24-C36)	0.502	0.501		mg/L		100	71 - 140
Surrogate	%Recovery	LCS Qualifier	Limits				Limits
o-Terphenyl	91		50 - 150				

**Lab Sample ID: LCSD 580-201493/3-A**

**Matrix: Water**

**Analysis Batch: 201519**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**  
**Prep Batch: 201493**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.	RPD
#2 Diesel (C10-C24)	0.500	0.458		mg/L		92	59 - 120	2

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53289-1

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

**Lab Sample ID: LCSD 580-201493/3-A**

**Matrix: Water**

**Analysis Batch: 201519**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 201493**

**%Rec.**

**RPD**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Motor Oil (>C24-C36)	0.502	0.500		mg/L		100	71 - 140	0	27
Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits						
<i>o-Terphenyl</i>	84		50 - 150						

## Method: 6020 - Metals (ICP/MS)

**Lab Sample ID: MB 580-201911/20-A**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 201911**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0050		mg/L		09/28/15 13:00	09/28/15 22:18	5
Barium	ND		0.0060		mg/L		09/28/15 13:00	09/28/15 22:18	5
Cadmium	ND		0.0020		mg/L		09/28/15 13:00	09/28/15 22:18	5
Chromium	ND		0.0020		mg/L		09/28/15 13:00	09/28/15 22:18	5
Copper	ND		0.010		mg/L		09/28/15 13:00	09/28/15 22:18	5
Lead	ND		0.0020		mg/L		09/28/15 13:00	09/28/15 22:18	5
Manganese	ND		0.010		mg/L		09/28/15 13:00	09/28/15 22:18	5
Selenium	ND		0.0050		mg/L		09/28/15 13:00	09/28/15 22:18	5
Silver	ND		0.0020		mg/L		09/28/15 13:00	09/28/15 22:18	5
Zinc	ND		0.035		mg/L		09/28/15 13:00	09/28/15 22:18	5

**Lab Sample ID: LCS 580-201911/21-A**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 201911**

**%Rec.**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits		
Arsenic	4.00	4.10		mg/L		102	80 - 120		
Barium	4.00	4.21		mg/L		105	80 - 120		
Cadmium	0.100	0.104		mg/L		104	80 - 120		
Chromium	0.400	0.393		mg/L		98	80 - 120		
Copper	0.500	0.500		mg/L		100	80 - 120		
Lead	1.00	0.939		mg/L		94	80 - 120		
Manganese	1.00	1.01		mg/L		101	80 - 120		
Selenium	4.00	4.25		mg/L		106	80 - 120		
Silver	0.600	0.588		mg/L		98	80 - 120		
Zinc	4.00	4.03		mg/L		101	80 - 120		

**Lab Sample ID: LCSD 580-201911/22-A**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 201911**

**%Rec.**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	4.00	4.07		mg/L		102	80 - 120	1	20
Barium	4.00	4.14		mg/L		103	80 - 120	2	20
Cadmium	0.100	0.104		mg/L		104	80 - 120	0	20
Chromium	0.400	0.392		mg/L		98	80 - 120	0	20

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53289-1

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: LCSD 580-201911/22-A**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 201911**

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec	Limits	RPD	Limit
	Added	Result	Qualifier						
Copper	0.500	0.502		mg/L		100	80 - 120	0	20
Lead	1.00	0.930		mg/L		93	80 - 120	1	20
Manganese	1.00	1.01		mg/L		101	80 - 120	0	20
Selenium	4.00	4.21		mg/L		105	80 - 120	1	20
Silver	0.600	0.582		mg/L		97	80 - 120	1	20
Zinc	4.00	4.01		mg/L		100	80 - 120	1	20

**Lab Sample ID: 580-53364-D-9-C MS**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Matrix Spike**

**Prep Type: Total/NA**

**Prep Batch: 201911**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier				
Arsenic	0.015		4.00	4.10		mg/L		102	80 - 120
Barium	0.097		4.00	4.22		mg/L		103	80 - 120
Cadmium	ND		0.100	0.103		mg/L		103	80 - 120
Chromium	0.0040		0.400	0.402		mg/L		100	80 - 120
Copper	ND		0.500	0.509		mg/L		102	80 - 120
Lead	ND		1.00	0.957		mg/L		96	80 - 120
Manganese	6.0		1.00	6.41	4	mg/L		39	80 - 120
Selenium	ND		4.00	4.27		mg/L		107	80 - 120
Silver	ND		0.600	0.581		mg/L		97	80 - 120
Zinc	ND		4.00	4.07		mg/L		101	80 - 120

**Lab Sample ID: 580-53364-D-9-D MSD**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total/NA**

**Prep Batch: 201911**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier				
Arsenic	0.015		4.00	4.38		mg/L		109	80 - 120
Barium	0.097		4.00	4.55		mg/L		111	80 - 120
Cadmium	ND		0.100	0.113		mg/L		113	80 - 120
Chromium	0.0040		0.400	0.434		mg/L		108	80 - 120
Copper	ND		0.500	0.541		mg/L		108	80 - 120
Lead	ND		1.00	1.02		mg/L		102	80 - 120
Manganese	6.0		1.00	6.94	4	mg/L		92	80 - 120
Selenium	ND		4.00	4.44		mg/L		111	80 - 120
Silver	ND		0.600	0.613		mg/L		102	80 - 120
Zinc	ND		4.00	4.35		mg/L		108	80 - 120

**Lab Sample ID: 580-53364-D-9-B DU**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Duplicate**

**Prep Type: Total/NA**

**Prep Batch: 201911**

Analyte	Sample	Sample	DU	DU	Unit	D		RPD	Limit
	Result	Qualifier	Result	Qualifier					
Arsenic	0.015		0.0147		mg/L			2	20
Barium	0.097		0.0981		mg/L			1	20
Cadmium	ND		ND		mg/L			NC	20
Chromium	0.0040		0.00364		mg/L			9	20
Copper	ND		ND		mg/L			NC	20

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53289-1

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: 580-53364-D-9-B DU**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Duplicate**

**Prep Type: Total/NA**

**Prep Batch: 201911**

**RPD**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Lead	ND		ND		mg/L		NC	20
Manganese	6.0		6.06		mg/L		0.6	20
Selenium	ND		ND		mg/L		NC	20
Silver	ND		ND		mg/L		NC	20
Zinc	ND		ND		mg/L		NC	20

**Lab Sample ID: MB 580-201583/21-A**

**Matrix: Water**

**Analysis Batch: 201710**

**Client Sample ID: Method Blank**

**Prep Type: Total Recoverable**

**Prep Batch: 201583**

**10**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0050		mg/L		09/24/15 06:48	09/24/15 14:23	5
Barium	ND		0.0060		mg/L		09/24/15 06:48	09/24/15 14:23	5
Cadmium	ND		0.0020		mg/L		09/24/15 06:48	09/24/15 14:23	5
Chromium	ND		0.0020		mg/L		09/24/15 06:48	09/24/15 14:23	5
Copper	ND		0.010		mg/L		09/24/15 06:48	09/24/15 14:23	5
Lead	ND		0.0020		mg/L		09/24/15 06:48	09/24/15 14:23	5
Manganese	ND		0.010		mg/L		09/24/15 06:48	09/24/15 14:23	5
Selenium	ND		0.0050		mg/L		09/24/15 06:48	09/24/15 14:23	5
Silver	ND		0.0020		mg/L		09/24/15 06:48	09/24/15 14:23	5
Zinc	ND		0.035		mg/L		09/24/15 06:48	09/24/15 14:23	5

**Lab Sample ID: LCS 580-201583/22-A**

**Matrix: Water**

**Analysis Batch: 201710**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total Recoverable**

**Prep Batch: 201583**

**11**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Arsenic	4.00	3.91		mg/L		98	80 - 120
Barium	4.00	4.08		mg/L		102	80 - 120
Cadmium	0.100	0.0992		mg/L		99	80 - 120
Chromium	0.400	0.381		mg/L		95	80 - 120
Copper	0.500	0.487		mg/L		97	80 - 120
Lead	1.00	0.943		mg/L		94	80 - 120
Manganese	1.00	0.968		mg/L		97	80 - 120
Selenium	4.00	3.96		mg/L		99	80 - 120
Silver	0.600	0.565		mg/L		94	80 - 120
Zinc	4.00	3.88		mg/L		97	80 - 120

**Lab Sample ID: LCSD 580-201583/23-A**

**Matrix: Water**

**Analysis Batch: 201710**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total Recoverable**

**Prep Batch: 201583**

**12**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	4.00	3.95		mg/L		99	80 - 120	1	20
Barium	4.00	4.09		mg/L		102	80 - 120	0	20
Cadmium	0.100	0.102		mg/L		102	80 - 120	3	20
Chromium	0.400	0.389		mg/L		97	80 - 120	2	20
Copper	0.500	0.500		mg/L		100	80 - 120	3	20
Lead	1.00	0.944		mg/L		94	80 - 120	0	20

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53289-1

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: LCSD 580-201583/23-A**

**Matrix: Water**

**Analysis Batch: 201710**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total Recoverable**

**Prep Batch: 201583**

**%Rec.**

**RPD**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Manganese	1.00	0.984		mg/L	98	80 - 120	2	20	
Selenium	4.00	4.02		mg/L	100	80 - 120	1	20	
Silver	0.600	0.570		mg/L	95	80 - 120	1	20	
Zinc	4.00	3.87		mg/L	97	80 - 120	0	20	

**Lab Sample ID: 580-53416-J-1-C MS**

**Matrix: Water**

**Analysis Batch: 201710**

**Client Sample ID: Matrix Spike**

**Prep Type: Total Recoverable**

**Prep Batch: 201583**

**%Rec.**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Arsenic	ND		4.00	4.12		mg/L	103	80 - 120	
Barium	0.0064		4.00	4.36		mg/L	109	80 - 120	
Cadmium	ND		0.100	0.104		mg/L	104	80 - 120	
Chromium	ND		0.400	0.429		mg/L	107	80 - 120	
Copper	ND		0.500	0.513		mg/L	103	80 - 120	
Lead	ND		1.00	1.01		mg/L	101	80 - 120	
Manganese	ND		1.00	1.08		mg/L	108	80 - 120	
Selenium	ND		4.00	4.18		mg/L	104	80 - 120	
Silver	ND		0.600	0.597		mg/L	99	80 - 120	
Zinc	ND		4.00	4.08		mg/L	102	80 - 120	

**Lab Sample ID: 580-53416-J-1-D MSD**

**Matrix: Water**

**Analysis Batch: 201710**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total Recoverable**

**Prep Batch: 201583**

**%Rec.**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	ND		4.00	4.33		mg/L	108	80 - 120	5	20	
Barium	0.0064		4.00	4.55		mg/L	114	80 - 120	4	20	
Cadmium	ND		0.100	0.112		mg/L	112	80 - 120	7	20	
Chromium	ND		0.400	0.432		mg/L	108	80 - 120	1	20	
Copper	ND		0.500	0.542		mg/L	108	80 - 120	6	20	
Lead	ND		1.00	1.05		mg/L	105	80 - 120	4	20	
Manganese	ND		1.00	1.11		mg/L	111	80 - 120	2	20	
Selenium	ND		4.00	4.41		mg/L	110	80 - 120	5	20	
Silver	ND		0.600	0.619		mg/L	103	80 - 120	4	20	
Zinc	ND		4.00	4.25		mg/L	106	80 - 120	4	20	

**Lab Sample ID: 580-53416-J-1-B DU**

**Matrix: Water**

**Analysis Batch: 201710**

**Client Sample ID: Duplicate**

**Prep Type: Total Recoverable**

**Prep Batch: 201583**

**RPD**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Arsenic	ND		ND		mg/L		NC	20
Barium	0.0064		0.00659		mg/L		2	20
Cadmium	ND		ND		mg/L		NC	20
Chromium	ND		ND		mg/L		NC	20
Copper	ND		ND		mg/L		NC	20
Lead	ND		ND		mg/L		NC	20
Manganese	ND		ND		mg/L		NC	20

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53289-1

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: 580-53416-J-1-B DU**

**Matrix: Water**

**Analysis Batch: 201710**

**Client Sample ID: Duplicate**

**Prep Type: Total Recoverable**

**Prep Batch: 201583**

**RPD**

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Selenium	ND		ND		mg/L		NC	20
Silver	ND		ND		mg/L		NC	20
Zinc	ND		ND		mg/L		NC	20

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 580-201962/21-A**

**Matrix: Water**

**Analysis Batch: 202007**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 201962**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	ND		0.00020		mg/L		09/29/15 06:53	09/29/15 11:15	1

**Lab Sample ID: LCS 580-201962/22-A**

**Matrix: Water**

**Analysis Batch: 202007**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 201962**

Analyte	Spike	LCS	LCS	Unit	D	%Rec.	Limits	RPD
	Added	Result	Qualifier					
Mercury	0.00200	0.00173		mg/L		87	80 - 120	

**Lab Sample ID: LCSD 580-201962/23-A**

**Matrix: Water**

**Analysis Batch: 202007**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 201962**

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec.	Limits	RPD
	Added	Result	Qualifier					
Mercury	0.00200	0.00179		mg/L		89	80 - 120	3

**Lab Sample ID: 580-53389-C-1-D MS**

**Matrix: Water**

**Analysis Batch: 202007**

**Client Sample ID: Matrix Spike**

**Prep Type: Total/NA**

**Prep Batch: 201962**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec.	Limits
	Result	Qualifier	Added	Result	Qualifier				
Mercury	ND		0.00200	0.00180		mg/L		90	80 - 120

**Lab Sample ID: 580-53389-C-1-E MSD**

**Matrix: Water**

**Analysis Batch: 202007**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total/NA**

**Prep Batch: 201962**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec.	Limits	RPD
	Result	Qualifier	Added	Result	Qualifier					
Mercury	ND		0.00200	0.00178		mg/L		89	80 - 120	1

**Lab Sample ID: 580-53389-C-1-C DU**

**Matrix: Water**

**Analysis Batch: 202007**

**Client Sample ID: Duplicate**

**Prep Type: Total/NA**

**Prep Batch: 201962**

Analyte	Sample	Sample	DU	DU	Unit	D	RPD
	Result	Qualifier	Result	Qualifier			
Mercury	ND		ND		mg/L		NC

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53289-1

## Method: 415.1 - TOC

**Lab Sample ID: MB 580-201591/3**

**Matrix: Water**

**Analysis Batch: 201591**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	mg/L				09/24/15 00:08	1

**Lab Sample ID: LCS 580-201591/4**

**Matrix: Water**

**Analysis Batch: 201591**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	Limits
Total Organic Carbon	10.0	9.56		mg/L		96	85 - 115

**Lab Sample ID: 580-53289-4 MS**

**Matrix: Water**

**Analysis Batch: 201591**

**Client Sample ID: CR-26-SC-CHEV**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec.	Limits
Total Organic Carbon	12		10.0	22.0		mg/L		104	85 - 115

**Lab Sample ID: 580-53289-4 MSD**

**Matrix: Water**

**Analysis Batch: 201591**

**Client Sample ID: CR-26-SC-CHEV**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	Limits	RPD	RPD Limit
Total Organic Carbon	12		10.0	22.7		mg/L		110	85 - 115	3	20

**Lab Sample ID: 580-53289-4 DU**

**Matrix: Water**

**Analysis Batch: 201591**

**Client Sample ID: CR-26-SC-CHEV**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Organic Carbon	12		12.0		mg/L		2	20

**Lab Sample ID: MB 580-201727/1**

**Matrix: Water**

**Analysis Batch: 201727**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Organic Carbon	ND		1.0	mg/L				09/25/15 02:11	1

**Lab Sample ID: LCS 580-201727/2**

**Matrix: Water**

**Analysis Batch: 201727**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	Limits
Total Organic Carbon	10.0	9.51		mg/L		95	85 - 115

**Lab Sample ID: 580-53323-H-5 MS**

**Matrix: Water**

**Analysis Batch: 201727**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec.	Limits
Total Organic Carbon	4.8		10.0	14.4		mg/L		97	85 - 115

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53289-1

**Lab Sample ID: 580-53323-H-5 MSD**

**Matrix: Water**

**Analysis Batch: 201727**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Organic Carbon	4.8		10.0	14.7		mg/L	99	85 - 115	2	20	

**Lab Sample ID: 580-53323-H-5 DU**

**Matrix: Water**

**Analysis Batch: 201727**

**Client Sample ID: Duplicate**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D		RPD	RPD Limit
Total Organic Carbon	4.8			4.94		mg/L			4	20

# Lab Chronicle

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53289-1

**Client Sample ID: TRIP BLANKS**

Date Collected: 09/14/15 00:00

Date Received: 09/14/15 13:30

**Lab Sample ID: 580-53289-1**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	NWTPH-Gx		1	201547	09/23/15 20:01	TL1	TAL SEA

**Client Sample ID: CR-27C-SC-CHEV**

Date Collected: 09/14/15 10:15

Date Received: 09/14/15 13:30

**Lab Sample ID: 580-53289-2**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	201735	09/25/15 18:06	K1K	TAL SEA
Total/NA	Prep	3520C			201093	09/17/15 17:01	JDR	TAL SEA
Total/NA	Analysis	8270C SIM		1	202181	09/30/15 23:13	ERZ	TAL SEA
Total/NA	Prep	3520C	RE		202974	10/10/15 11:07	JDR	TAL SEA
Total/NA	Analysis	8270C SIM	RE	10	204128	10/23/15 17:17	ERZ	TAL SEA
Total/NA	Prep	3520C	DL		201093	09/17/15 17:01	JDR	TAL SEA
Total/NA	Analysis	8270C SIM	DL	10	204170	10/24/15 17:50	ERZ	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	201547	09/24/15 04:51	TL1	TAL SEA
Total/NA	Prep	3510C			201493	09/23/15 09:06	DCC	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	201519	09/24/15 00:05	KW	TAL SEA
Dissolved	Prep	3005A			201583	09/24/15 06:48	MKN	TAL SEA
Dissolved	Analysis	6020		5	201710	09/24/15 14:37	FCW	TAL SEA
Total/NA	Prep	3010A			201911	09/28/15 13:00	PAB	TAL SEA
Total/NA	Analysis	6020		5	201970	09/28/15 23:49	FCW	TAL SEA
Dissolved	Prep	7470A			201962	09/29/15 06:53	MKN	TAL SEA
Dissolved	Analysis	7470A		1	202007	09/29/15 11:54	FCW	TAL SEA
Total/NA	Prep	7470A			201962	09/29/15 06:53	MKN	TAL SEA
Total/NA	Analysis	7470A		1	202007	09/29/15 11:52	FCW	TAL SEA
Total/NA	Analysis	415.1		1	201591	09/24/15 00:08	RSB	TAL SEA

**Client Sample ID: BD-SC-CHEV-1**

Date Collected: 09/14/15 00:00

Date Received: 09/14/15 13:30

**Lab Sample ID: 580-53289-3**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	201735	09/25/15 18:34	K1K	TAL SEA
Total/NA	Prep	3520C			201093	09/17/15 17:01	JDR	TAL SEA
Total/NA	Analysis	8270C SIM		1	202181	09/30/15 23:36	ERZ	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	201547	09/24/15 05:24	TL1	TAL SEA
Total/NA	Prep	3510C			201493	09/23/15 09:06	DCC	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	201519	09/24/15 00:23	KW	TAL SEA
Total/NA	Prep	3010A			201911	09/28/15 13:00	PAB	TAL SEA
Total/NA	Analysis	6020		5	201970	09/29/15 00:03	FCW	TAL SEA
Total/NA	Prep	7470A			201962	09/29/15 06:53	MKN	TAL SEA
Total/NA	Analysis	7470A		1	202007	09/29/15 11:57	FCW	TAL SEA

TestAmerica Seattle

# Lab Chronicle

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53289-1

**Client Sample ID: BD-SC-CHEV-1**

Date Collected: 09/14/15 00:00

Date Received: 09/14/15 13:30

**Lab Sample ID: 580-53289-3**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	415.1		1	201727	09/25/15 02:11	RSB	TAL SEA

**Client Sample ID: CR-26-SC-CHEV**

Date Collected: 09/14/15 09:15

Date Received: 09/14/15 13:30

**Lab Sample ID: 580-53289-4**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	201735	09/25/15 19:07	K1K	TAL SEA
Total/NA	Prep	3520C			201093	09/17/15 17:01	JDR	TAL SEA
Total/NA	Analysis	8270C SIM		1	202181	09/30/15 23:59	ERZ	TAL SEA
Total/NA	Prep	3520C	RE		202974	10/10/15 11:07	JDR	TAL SEA
Total/NA	Analysis	8270C SIM	RE	50	204128	10/23/15 17:40	ERZ	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	201547	09/24/15 05:57	TL1	TAL SEA
Total/NA	Prep	3510C			201493	09/23/15 09:06	DCC	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	201519	09/24/15 00:41	KW	TAL SEA
Total/NA	Prep	3010A			201911	09/28/15 13:00	PAB	TAL SEA
Total/NA	Analysis	6020		5	201970	09/29/15 00:07	FCW	TAL SEA
Total/NA	Prep	7470A			201962	09/29/15 06:53	MKN	TAL SEA
Total/NA	Analysis	7470A		1	202007	09/29/15 11:59	FCW	TAL SEA
Total/NA	Analysis	415.1		1	201591	09/24/15 00:08	RSB	TAL SEA

**Laboratory References:**

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

TestAmerica Seattle

## Certification Summary

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53289-1

### Laboratory: TestAmerica Seattle

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-022	03-02-16
California	State Program	9	2901	01-31-17
L-A-B	DoD ELAP		L2236	01-19-16
L-A-B	ISO/IEC 17025		L2236	01-19-16
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-06-16
US Fish & Wildlife	Federal		LE058448-0	02-28-16
USDA	Federal		P330-14-00126	04-08-17
Washington	State Program	10	C553	02-17-16

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TestAmerica Seattle

## Sample Summary

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53289-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-53289-1	TRIP BLANKS	Water	09/14/15 00:00	09/14/15 13:30
580-53289-2	CR-27C-SC-CHEV	Water	09/14/15 10:15	09/14/15 13:30
580-53289-3	BD-SC-CHEV-1	Water	09/14/15 00:00	09/14/15 13:30
580-53289-4	CR-26-SC-CHEV	Water	09/14/15 09:15	09/14/15 13:30

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Beaverton, OR 97005  
Phone: 503-984-2200

580-53289 Chain of Custod

## Chain of Custody Record

091802

Tech America

**THE LEADER IN ENVIRONMENTAL TESTING**  
**TestAmerica Laboratories, Inc.**

TAL-8210 (0713)

## Login Sample Receipt Checklist

Client: ARCADIS U.S. Inc

Job Number: 580-53289-1

**Login Number:** 53289

**List Source:** TestAmerica Seattle

**List Number:** 1

**Creator:** Gonzales, Steve

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	N/A	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Seattle

5755 8th Street East

Tacoma, WA 98424

Tel: (253)922-2310

TestAmerica Job ID: 580-53308-1

Client Project/Site: 3Q2015 Willbridge GWM

B0046601.0012.0042

For:

ARCADIS U.S. Inc  
111 SW Columbia Street  
Suite 670  
Portland, Oregon 97201

Attn: Brian Marcum

Sarah Murphy

Authorized for release by:

11/2/2015 3:42:59 PM

Sarah Murphy, Project Manager I

(253)922-2310

[sarah.murphy@testamericainc.com](mailto:sarah.murphy@testamericainc.com)

### LINKS

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results through

Total Access

Have a Question?

Ask  
The  
Expert

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[www.testamericainc.com](http://www.testamericainc.com)

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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# Case Narrative

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53308-1

## Job ID: 580-53308-1

### Laboratory: TestAmerica Seattle

#### Narrative

##### Job Narrative 580-53308-1

#### Receipt

The samples were received on 9/15/2015 9:05 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 3.9° C and 5.1° C.

#### GC/MS VOA

Method(s) 8260B: The laboratory control sample (LCS) for batch analytical batch 580-201783 recovered outside control limits for the following analytes: Methyl tert-butyl ether. These analytes were biased high in the LCS and were not detected in the associated samples; therefore, the data have been reported.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### GC/MS Semi VOA

Method(s) 8270C SIM: The following sample was diluted to bring the concentration of target analytes within the calibration range: B-7-SC-CHEV (580-53308-2) at 10.0. Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### GC Semi VOA

Method(s) NWTPH-Dx: The following sample required a dilution due to the nature of the sample matrix: B-7-SC-CHEV (580-53308-2). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Organic Prep

Method(s) 3520C: Sample B-7-SC-CHEV (580-53308-2) did not contain a full 1-L volume

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Definitions/Glossary

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53308-1

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.

### GC Semi VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits

## Glossary

### Abbreviation

**These commonly used abbreviations may or may not be present in this report.**

□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

1

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# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53308-1

**Client Sample ID: Trip Blank**

Date Collected: 09/14/15 00:00

Date Received: 09/15/15 09:05

**Lab Sample ID: 580-53308-1**

Matrix: Water

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050		mg/L			09/17/15 18:22	1
<b>Surrogate</b>									
	%Recovery	Qualifier		Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	90			50 - 150				09/17/15 18:22	1
Trifluorotoluene (Surr)	111			50 - 150				09/17/15 18:22	1

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53308-1

**Client Sample ID: B-7-SC-CHEV**

Date Collected: 09/14/15 14:30

Date Received: 09/15/15 09:05

**Lab Sample ID: 580-53308-2**

Matrix: Water

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			09/25/15 21:32	1
Ethylbenzene	ND		3.0		ug/L			09/25/15 21:32	1
Methyl tert-butyl ether	ND *		1.0		ug/L			09/25/15 21:32	1
m-Xylene & p-Xylene	ND		3.0		ug/L			09/25/15 21:32	1
o-Xylene	ND		2.0		ug/L			09/25/15 21:32	1
Toluene	ND		2.0		ug/L			09/25/15 21:32	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	110			75 - 120				09/25/15 21:32	1
Dibromofluoromethane (Surr)	106			85 - 115				09/25/15 21:32	1
1,2-Dichloroethane-d4 (Surr)	108			70 - 120				09/25/15 21:32	1
Toluene-d8 (Surr)	91			85 - 120				09/25/15 21:32	1
Trifluorotoluene (Surr)	105			70 - 136				09/25/15 21:32	1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	0.21		0.015		ug/L		09/19/15 14:58	10/03/15 22:23	1
2-Methylnaphthalene	ND		0.019		ug/L		09/19/15 14:58	10/03/15 22:23	1
1-Methylnaphthalene	0.42		0.015		ug/L		09/19/15 14:58	10/03/15 22:23	1
Phenanthrene	ND		0.15		ug/L		09/19/15 14:58	10/03/15 22:23	1
Anthracene	ND		0.037		ug/L		09/19/15 14:58	10/03/15 22:23	1
Fluoranthene	0.077		0.074		ug/L		09/19/15 14:58	10/03/15 22:23	1
Pyrene	0.17		0.074		ug/L		09/19/15 14:58	10/03/15 22:23	1
Benzo[a]anthracene	ND		0.015		ug/L		09/19/15 14:58	10/03/15 22:23	1
Chrysene	ND		0.015		ug/L		09/19/15 14:58	10/03/15 22:23	1
Benzo[a]pyrene	ND		0.015		ug/L		09/19/15 14:58	10/03/15 22:23	1
Indeno[1,2,3-cd]pyrene	ND		0.015		ug/L		09/19/15 14:58	10/03/15 22:23	1
Dibenz(a,h)anthracene	ND		0.015		ug/L		09/19/15 14:58	10/03/15 22:23	1
Benzo[g,h,i]perylene	ND		0.015		ug/L		09/19/15 14:58	10/03/15 22:23	1
Benzo[b]fluoranthene	ND		0.015		ug/L		09/19/15 14:58	10/03/15 22:23	1
Benzo[k]fluoranthene	ND		0.015		ug/L		09/19/15 14:58	10/03/15 22:23	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Terphenyl-d14	81			64 - 150				09/19/15 14:58	10/03/15 22:23

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	0.45		0.15		ug/L		09/19/15 14:58	10/24/15 11:41	10
Acenaphthene	1.7		0.15		ug/L		09/19/15 14:58	10/24/15 11:41	10
Fluorene	6.2		0.15		ug/L		09/19/15 14:58	10/24/15 11:41	10
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Terphenyl-d14	98			64 - 150				09/19/15 14:58	10/24/15 11:41

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	0.70		0.050		mg/L			09/17/15 20:01	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	95		50 - 150					09/17/15 20:01	1
Trifluorotoluene (Surr)	106		50 - 150					09/17/15 20:01	1

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53308-1

**Client Sample ID: B-7-SC-CHEV**

Date Collected: 09/14/15 14:30

Date Received: 09/15/15 09:05

**Lab Sample ID: 580-53308-2**

Matrix: Water

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	18		1.0		mg/L		09/23/15 09:06	10/22/15 14:12	10
Motor Oil (>C24-C36)	ND		2.4		mg/L		09/23/15 09:06	10/22/15 14:12	10
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>		<b>Limits</b>					
<i>o-Terphenyl</i>	202	X		50 - 150			09/23/15 09:06	10/22/15 14:12	10

## Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0058		0.0050		mg/L		09/26/15 06:52	09/28/15 17:11	5
Barium	0.055		0.0060		mg/L		09/26/15 06:52	09/28/15 17:11	5
Cadmium	ND		0.0020		mg/L		09/26/15 06:52	09/28/15 17:11	5
Chromium	ND		0.0020		mg/L		09/26/15 06:52	09/28/15 17:11	5
Copper	ND		0.010		mg/L		09/26/15 06:52	09/28/15 17:11	5
Lead	ND		0.0020		mg/L		09/26/15 06:52	09/28/15 17:11	5
Manganese	3.9		0.010		mg/L		09/26/15 06:52	09/28/15 17:11	5
Selenium	ND		0.0050		mg/L		09/26/15 06:52	09/28/15 17:11	5
Silver	ND		0.0020		mg/L		09/26/15 06:52	09/28/15 17:11	5
Zinc	ND		0.035		mg/L		09/26/15 06:52	09/28/15 17:11	5

## Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		09/29/15 06:53	09/29/15 12:01	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.060		mg/L		09/18/15 10:00	09/18/15 10:00	1

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53308-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 580-201783/4**

**Matrix: Water**

**Analysis Batch: 201783**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		2.0		ug/L			09/25/15 17:29	1
Ethylbenzene	ND		3.0		ug/L			09/25/15 17:29	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/25/15 17:29	1
m-Xylene & p-Xylene	ND		3.0		ug/L			09/25/15 17:29	1
o-Xylene	ND		2.0		ug/L			09/25/15 17:29	1
Toluene	ND		2.0		ug/L			09/25/15 17:29	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	110		75 - 120		09/25/15 17:29	1
Dibromofluoromethane (Surr)	104		85 - 115		09/25/15 17:29	1
1,2-Dichloroethane-d4 (Surr)	104		70 - 120		09/25/15 17:29	1
Toluene-d8 (Surr)	95		85 - 120		09/25/15 17:29	1
Trifluorotoluene (Surr)	109		70 - 136		09/25/15 17:29	1

**Lab Sample ID: LCS 580-201783/5**

**Matrix: Water**

**Analysis Batch: 201783**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike	LCS	LCS	Unit	D	%Rec	%Rec.	Limits
	Added	Result	Qualifier					
Benzene	20.1	23.7		ug/L		118	80 - 120	
Ethylbenzene	20.1	22.7		ug/L		113	75 - 125	
Methyl tert-butyl ether	20.0	25.8	*	ug/L		129	65 - 125	
m-Xylene & p-Xylene	20.0	24.4		ug/L		122	75 - 130	
o-Xylene	20.0	23.7		ug/L		118	80 - 120	
Toluene	20.0	22.8		ug/L		114	75 - 120	

Surrogate	LCSD	LCSD	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	110		75 - 120			
Dibromofluoromethane (Surr)	105		85 - 115			
1,2-Dichloroethane-d4 (Surr)	106		70 - 120			
Toluene-d8 (Surr)	94		85 - 120			
Trifluorotoluene (Surr)	109		70 - 136			

**Lab Sample ID: LCSD 580-201783/6**

**Matrix: Water**

**Analysis Batch: 201783**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec	Limits	RPD	Limit
	Added	Result	Qualifier						
Benzene	20.1	23.3		ug/L		116	80 - 120	2	30
Ethylbenzene	20.1	21.8		ug/L		109	75 - 125	4	30
Methyl tert-butyl ether	20.0	24.6		ug/L		123	65 - 125	5	30
m-Xylene & p-Xylene	20.0	23.3		ug/L		116	75 - 130	5	30
o-Xylene	20.0	22.9		ug/L		115	80 - 120	3	30
Toluene	20.0	22.3		ug/L		111	75 - 120	2	30

Surrogate	LCSD	LCSD	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	108		75 - 120			

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53308-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID:** LCSD 580-201783/6

**Matrix:** Water

**Analysis Batch:** 201783

**Client Sample ID:** Lab Control Sample Dup

**Prep Type:** Total/NA

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Dibromofluoromethane (Surr)	103		85 - 115
1,2-Dichloroethane-d4 (Surr)	102		70 - 120
Toluene-d8 (Surr)	93		85 - 120
Trifluorotoluene (Surr)	107		70 - 136

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

**Lab Sample ID:** MB 580-201261/1-A

**Matrix:** Water

**Analysis Batch:** 202430

**Client Sample ID:** Method Blank

**Prep Type:** Total/NA

**Prep Batch:** 201261

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	MB Result	MB Qualifier	RL	MDL	Unit		Prepared	Analyzed	
Naphthalene	ND		0.010		ug/L	09/19/15 14:58	10/03/15 16:35		1
2-Methylnaphthalene	ND		0.013		ug/L	09/19/15 14:58	10/03/15 16:35		1
1-Methylnaphthalene	ND		0.010		ug/L	09/19/15 14:58	10/03/15 16:35		1
Acenaphthylene	ND		0.010		ug/L	09/19/15 14:58	10/03/15 16:35		1
Acenaphthene	ND		0.010		ug/L	09/19/15 14:58	10/03/15 16:35		1
Fluorene	ND		0.010		ug/L	09/19/15 14:58	10/03/15 16:35		1
Phenanthrene	ND		0.10		ug/L	09/19/15 14:58	10/03/15 16:35		1
Anthracene	ND		0.025		ug/L	09/19/15 14:58	10/03/15 16:35		1
Fluoranthene	ND		0.050		ug/L	09/19/15 14:58	10/03/15 16:35		1
Pyrene	ND		0.050		ug/L	09/19/15 14:58	10/03/15 16:35		1
Benzo[a]anthracene	ND		0.010		ug/L	09/19/15 14:58	10/03/15 16:35		1
Chrysene	ND		0.010		ug/L	09/19/15 14:58	10/03/15 16:35		1
Benzo[a]pyrene	ND		0.010		ug/L	09/19/15 14:58	10/03/15 16:35		1
Indeno[1,2,3-cd]pyrene	ND		0.010		ug/L	09/19/15 14:58	10/03/15 16:35		1
Dibenz(a,h)anthracene	ND		0.010		ug/L	09/19/15 14:58	10/03/15 16:35		1
Benzo[g,h,i]perylene	ND		0.010		ug/L	09/19/15 14:58	10/03/15 16:35		1
Benzo[b]fluoranthene	ND		0.010		ug/L	09/19/15 14:58	10/03/15 16:35		1
Benzo[k]fluoranthene	ND		0.010		ug/L	09/19/15 14:58	10/03/15 16:35		1
Surrogate	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Terphenyl-d14	94			64 - 150			09/19/15 14:58	10/03/15 16:35	1

**Lab Sample ID:** LCS 580-201261/2-A

**Matrix:** Water

**Analysis Batch:** 202430

**Client Sample ID:** Lab Control Sample

**Prep Type:** Total/NA

**Prep Batch:** 201261

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits	%Rec.
	Added	Result	Qualifier	Unit				
Naphthalene	1.00	0.683		ug/L	68	68	54 - 106	
2-Methylnaphthalene	1.00	0.741		ug/L	74	54	54 - 114	
1-Methylnaphthalene	1.00	0.730		ug/L	73	57	57 - 115	
Acenaphthylene	1.00	0.667		ug/L	67	30	30 - 127	
Acenaphthene	1.00	0.680		ug/L	68	54	54 - 109	
Fluorene	1.00	0.745		ug/L	74	50	50 - 130	
Phenanthrene	1.00	0.765		ug/L	76	53	53 - 115	
Anthracene	1.00	0.533		ug/L	53	30	30 - 130	

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53308-1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

**Lab Sample ID: LCS 580-201261/2-A**

**Matrix: Water**

**Analysis Batch: 202430**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 201261**

**%Rec.**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Fluoranthene	1.00	0.710		ug/L	71	58 - 128	
Pyrene	1.00	0.683		ug/L	68	53 - 121	
Benzo[a]anthracene	1.00	0.636		ug/L	64	35 - 125	
Chrysene	1.00	0.736		ug/L	74	57 - 120	
Benzo[a]pyrene	1.00	0.531		ug/L	53	30 - 127	
Indeno[1,2,3-cd]pyrene	1.00	0.845		ug/L	85	53 - 131	
Dibenz(a,h)anthracene	1.00	0.869		ug/L	87	60 - 136	
Benzo[g,h,i]perylene	1.00	0.766		ug/L	77	51 - 128	
Benzo[b]fluoranthene	1.00	0.782		ug/L	78	59 - 126	
Benzo[k]fluoranthene	1.00	0.685		ug/L	68	49 - 136	

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Terphenyl-d14	83		64 - 150

**Lab Sample ID: LCSD 580-201261/3-A**

**Matrix: Water**

**Analysis Batch: 202430**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 201261**

**%Rec.**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Naphthalene	1.00	0.709		ug/L	71	54 - 106		4	20
2-Methylnaphthalene	1.00	0.785		ug/L	79	54 - 114		6	20
1-Methylnaphthalene	1.00	0.766		ug/L	77	57 - 115		5	20
Acenaphthylene	1.00	0.697		ug/L	70	30 - 127		4	20
Acenaphthene	1.00	0.705		ug/L	71	54 - 109		4	20
Fluorene	1.00	0.775		ug/L	77	50 - 130		4	20
Phenanthrene	1.00	0.781		ug/L	78	53 - 115		2	20
Anthracene	1.00	0.570		ug/L	57	30 - 130		7	20
Fluoranthene	1.00	0.736		ug/L	74	58 - 128		4	20
Pyrene	1.00	0.707		ug/L	71	53 - 121		3	20
Benzo[a]anthracene	1.00	0.658		ug/L	66	35 - 125		3	20
Chrysene	1.00	0.757		ug/L	76	57 - 120		3	20
Benzo[a]pyrene	1.00	0.550		ug/L	55	30 - 127		4	20
Indeno[1,2,3-cd]pyrene	1.00	0.869		ug/L	87	53 - 131		3	20
Dibenz(a,h)anthracene	1.00	0.897		ug/L	90	60 - 136		3	20
Benzo[g,h,i]perylene	1.00	0.787		ug/L	79	51 - 128		3	20
Benzo[b]fluoranthene	1.00	0.809		ug/L	81	59 - 126		3	20
Benzo[k]fluoranthene	1.00	0.709		ug/L	71	49 - 136		4	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Terphenyl-d14	87		64 - 150

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53308-1

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

**Lab Sample ID: MB 580-201089/5**

**Matrix: Water**

**Analysis Batch: 201089**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050		mg/L			09/17/15 16:09	1
<hr/>									
<b>Surrogate</b>									
4-Bromofluorobenzene (Surr)	89		50 - 150				Prepared	09/17/15 16:09	1
Trifluorotoluene (Surr)	108		50 - 150					09/17/15 16:09	1

**Lab Sample ID: LCS 580-201089/6**

**Matrix: Water**

**Analysis Batch: 201089**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	%Rec. Limits
Gasoline	1.16	1.06		mg/L		92	79 - 110
<hr/>							
<b>Surrogate</b>							
4-Bromofluorobenzene (Surr)	98		50 - 150				
Trifluorotoluene (Surr)	116		50 - 150				

**Lab Sample ID: LCSD 580-201089/7**

**Matrix: Water**

**Analysis Batch: 201089**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec.	RPD	RPD Limit
Gasoline	1.16	1.02		mg/L		88	79 - 110	5 / 20
<hr/>								
<b>Surrogate</b>								
4-Bromofluorobenzene (Surr)	96		50 - 150					
Trifluorotoluene (Surr)	110		50 - 150					

## Method: 6020 - Metals (ICP/MS)

**Lab Sample ID: MB 580-201816/21-A**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Method Blank**  
**Prep Type: Total Recoverable**  
**Prep Batch: 201816**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010		mg/L		09/26/15 06:52	09/28/15 13:28	1
Barium	ND		0.0012		mg/L		09/26/15 06:52	09/28/15 13:28	1
Cadmium	ND		0.00040		mg/L		09/26/15 06:52	09/28/15 13:28	1
Chromium	ND		0.00040		mg/L		09/26/15 06:52	09/28/15 13:28	1
Copper	ND		0.0020		mg/L		09/26/15 06:52	09/28/15 13:28	1
Lead	ND		0.00040		mg/L		09/26/15 06:52	09/28/15 13:28	1
Manganese	ND		0.0020		mg/L		09/26/15 06:52	09/28/15 13:28	1
Selenium	ND		0.0010		mg/L		09/26/15 06:52	09/28/15 13:28	1
Silver	ND		0.00040		mg/L		09/26/15 06:52	09/28/15 13:28	1
Zinc	ND		0.0070		mg/L		09/26/15 06:52	09/28/15 13:28	1

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53308-1

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: LCS 580-201816/22-A**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total Recoverable**

**Prep Batch: 201816**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Arsenic	4.00	4.11		mg/L	103	80 - 120	
Barium	4.00	4.19		mg/L	105	80 - 120	
Cadmium	0.100	0.105		mg/L	105	80 - 120	
Chromium	0.400	0.407		mg/L	102	80 - 120	
Copper	0.500	0.514		mg/L	103	80 - 120	
Lead	1.00	0.947		mg/L	95	80 - 120	
Manganese	1.00	1.02		mg/L	102	80 - 120	
Selenium	4.00	4.21		mg/L	105	80 - 120	
Silver	0.600	0.590		mg/L	98	80 - 120	
Zinc	4.00	4.07		mg/L	102	80 - 120	

**Lab Sample ID: LCSD 580-201816/23-A**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total Recoverable**

**Prep Batch: 201816**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	4.00	4.12		mg/L	103	80 - 120		0	20
Barium	4.00	4.18		mg/L	105	80 - 120		0	20
Cadmium	0.100	0.101		mg/L	101	80 - 120		3	20
Chromium	0.400	0.406		mg/L	101	80 - 120		0	20
Copper	0.500	0.506		mg/L	101	80 - 120		2	20
Lead	1.00	0.950		mg/L	95	80 - 120		0	20
Manganese	1.00	1.03		mg/L	103	80 - 120		1	20
Selenium	4.00	4.19		mg/L	105	80 - 120		1	20
Silver	0.600	0.592		mg/L	99	80 - 120		0	20
Zinc	4.00	4.05		mg/L	101	80 - 120		0	20

**Lab Sample ID: 580-53416-J-10-C MS**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Matrix Spike**

**Prep Type: Total Recoverable**

**Prep Batch: 201816**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Arsenic	0.0061		4.00	4.63		mg/L	116	80 - 120	
Barium	0.015		4.00	4.64		mg/L	116	80 - 120	
Cadmium	ND		0.100	0.120		mg/L	120	80 - 120	
Chromium	ND		0.400	0.457		mg/L	114	80 - 120	
Copper	ND		0.500	0.575		mg/L	115	80 - 120	
Lead	ND		1.00	1.09		mg/L	109	80 - 120	
Manganese	1.7		1.00	2.87		mg/L	117	80 - 120	
Selenium	ND		4.00	4.71		mg/L	118	80 - 120	
Silver	ND		0.600	0.640		mg/L	107	80 - 120	
Zinc	ND		4.00	4.61		mg/L	115	80 - 120	

**Lab Sample ID: 580-53416-J-10-D MSD**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total Recoverable**

**Prep Batch: 201816**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD
Arsenic	0.0061		4.00	4.48		mg/L	112	80 - 120		3

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53308-1

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: 580-53416-J-10-D MSD**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total Recoverable**

**Prep Batch: 201816**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier						
Barium	0.015		4.00	4.48		mg/L	112	80 - 120	3	20	
Cadmium	ND		0.100	0.115		mg/L	115	80 - 120	5	20	
Chromium	ND		0.400	0.450		mg/L	112	80 - 120	2	20	
Copper	ND		0.500	0.555		mg/L	111	80 - 120	4	20	
Lead	ND		1.00	1.05		mg/L	105	80 - 120	4	20	
Manganese	1.7		1.00	2.78		mg/L	108	80 - 120	3	20	
Selenium	ND		4.00	4.52		mg/L	113	80 - 120	4	20	
Silver	ND		0.600	0.617		mg/L	103	80 - 120	4	20	
Zinc	ND		4.00	4.39		mg/L	110	80 - 120	5	20	

**Lab Sample ID: 580-53416-J-10-B DU**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Duplicate**

**Prep Type: Total Recoverable**

**Prep Batch: 201816**

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Arsenic	0.0061		0.00626		mg/L		2	20
Barium	0.015		0.0154		mg/L		0.3	20
Cadmium	ND		ND		mg/L		NC	20
Chromium	ND		ND		mg/L		NC	20
Copper	ND		ND		mg/L		NC	20
Lead	ND		ND		mg/L		NC	20
Manganese	1.7		1.65		mg/L		3	20
Selenium	ND		ND		mg/L		NC	20
Silver	ND		ND		mg/L		NC	20
Zinc	ND		ND		mg/L		NC	20

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 580-201962/21-A**

**Matrix: Water**

**Analysis Batch: 202007**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 201962**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Mercury	ND		0.00020		mg/L		09/29/15 06:53	09/29/15 11:15	1

**Lab Sample ID: LCS 580-201962/22-A**

**Matrix: Water**

**Analysis Batch: 202007**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 201962**

Analyte	Spike	LCS	LCS	Unit	D	%Rec	Limits
	Added	Result	Qualifier				
Mercury	0.00200	0.00173		mg/L	87	80 - 120	

**Lab Sample ID: LCSD 580-201962/23-A**

**Matrix: Water**

**Analysis Batch: 202007**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 201962**

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec	Limits	RPD	Limit
	Added	Result	Qualifier						
Mercury	0.00200	0.00179		mg/L	89	80 - 120	3	20	

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53308-1

## Method: 7470A - Mercury (CVAA) (Continued)

**Lab Sample ID: 580-53389-C-1-D MS**

**Matrix: Water**

**Analysis Batch: 202007**

**Client Sample ID: Matrix Spike**

**Prep Type: Total/NA**

**Prep Batch: 201962**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec.	Limits
Mercury	ND		0.00200	0.00180		mg/L		90	80 - 120

**Lab Sample ID: 580-53389-C-1-E MSD**

**Matrix: Water**

**Analysis Batch: 202007**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total/NA**

**Prep Batch: 201962**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	RPD	Limit
Mercury	ND		0.00200	0.00178		mg/L		89	80 - 120	1 20

**Lab Sample ID: 580-53389-C-1-C DU**

**Matrix: Water**

**Analysis Batch: 202007**

**Client Sample ID: Duplicate**

**Prep Type: Total/NA**

**Prep Batch: 201962**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Mercury	ND		ND		mg/L		NC	20

## Method: SM 4500 CN E - Cyanide, Total

**Lab Sample ID: MB 580-201183/1-A**

**Matrix: Water**

**Analysis Batch: 201184**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 201183**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.060		mg/L		09/18/15 10:00	09/18/15 10:00	1

**Lab Sample ID: LCS 580-201183/2-A**

**Matrix: Water**

**Analysis Batch: 201184**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 201183**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	Limits
Cyanide, Total	0.500	0.490		mg/L		98	90 - 110

**Lab Sample ID: 580-53313-D-1-C MS**

**Matrix: Water**

**Analysis Batch: 201184**

**Client Sample ID: Matrix Spike**

**Prep Type: Total/NA**

**Prep Batch: 201183**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec.	Limits
Cyanide, Total	ND		0.500	0.486		mg/L		97	90 - 110

**Lab Sample ID: 580-53313-D-1-D MSD**

**Matrix: Water**

**Analysis Batch: 201184**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total/NA**

**Prep Batch: 201183**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	RPD	Limit
Cyanide, Total	ND		0.500	0.487		mg/L		97	90 - 110	0 10

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53308-1

## Method: SM 4500 CN E - Cyanide, Total (Continued)

Lab Sample ID: 580-53313-D-1-B DU

Matrix: Water

Analysis Batch: 201184

Client Sample ID: Duplicate

Prep Type: Total/NA

Prep Batch: 201183

RPD

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Cyanide, Total	ND		ND		mg/L		NC	10

# Lab Chronicle

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53308-1

**Client Sample ID: Trip Blank**

**Date Collected: 09/14/15 00:00**

**Date Received: 09/15/15 09:05**

**Lab Sample ID: 580-53308-1**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	NWTPH-Gx		1	201089	09/17/15 18:22	CJ	TAL SEA

**Client Sample ID: B-7-SC-CHEV**

**Date Collected: 09/14/15 14:30**

**Date Received: 09/15/15 09:05**

**Lab Sample ID: 580-53308-2**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	201783	09/25/15 21:32	CJ	TAL SEA
Total/NA	Prep	3520C			201261	09/19/15 14:58	JDR	TAL SEA
Total/NA	Analysis	8270C SIM		1	202430	10/03/15 22:23	AHP	TAL SEA
Total/NA	Prep	3520C	DL		201261	09/19/15 14:58	JDR	TAL SEA
Total/NA	Analysis	8270C SIM	DL	10	204170	10/24/15 11:41	ERZ	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	201089	09/17/15 20:01	CJ	TAL SEA
Total/NA	Prep	3510C			201493	09/23/15 09:06	DCC	TAL SEA
Total/NA	Analysis	NWTPH-Dx		10	203982	10/22/15 14:12	JGM	TAL SEA
Dissolved	Prep	3005A			201816	09/26/15 06:52	MKN	TAL SEA
Dissolved	Analysis	6020		5	201970	09/28/15 17:11	FCW	TAL SEA
Dissolved	Prep	7470A			201962	09/29/15 06:53	MKN	TAL SEA
Dissolved	Analysis	7470A		1	202007	09/29/15 12:01	FCW	TAL SEA
Total/NA	Analysis	SM 4500 CN E		1	201184	09/18/15 10:00	JLS	TAL SEA
Total/NA	Prep	Distill/CN			201183	09/18/15 10:00	JLS	TAL SEA

## Laboratory References:

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

TestAmerica Seattle

## Certification Summary

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53308-1

### Laboratory: TestAmerica Seattle

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-022	03-02-16
California	State Program	9	2901	01-31-17
L-A-B	DoD ELAP		L2236	01-19-16
L-A-B	ISO/IEC 17025		L2236	01-19-16
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-06-16
US Fish & Wildlife	Federal		LE058448-0	02-28-16
USDA	Federal		P330-14-00126	04-08-17
Washington	State Program	10	C553	02-17-16

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TestAmerica Seattle

## Sample Summary

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53308-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-53308-1	Trip Blank	Water	09/14/15 00:00	09/15/15 09:05
580-53308-2	B-7-SC-CHEV	Water	09/14/15 14:30	09/15/15 09:05

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TestAmerica Seattle



## Login Sample Receipt Checklist

Client: ARCADIS U.S. Inc

Job Number: 580-53308-1

**Login Number: 53308**

**List Source: TestAmerica Seattle**

**List Number: 1**

**Creator: Svabik-Seror, Philip M**

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Seattle

5755 8th Street East

Tacoma, WA 98424

Tel: (253)922-2310

TestAmerica Job ID: 580-53309-1

Client Project/Site: 3Q2015 Willbridge GWM  
B0046601.0012.0042

For:

ARCADIS U.S. Inc  
111 SW Columbia Street  
Suite 670  
Portland, Oregon 97201

Attn: Brian Marcum

Sarah Murphy

Authorized for release by:

10/31/2015 11:00:29 AM

Sarah Murphy, Project Manager I

(253)922-2310

[sarah.murphy@testamericainc.com](mailto:sarah.murphy@testamericainc.com)

### LINKS

Review your project  
results through

TotalAccess

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Ask  
The  
Expert

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[www.testamericainc.com](http://www.testamericainc.com)

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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# Case Narrative

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53309-1

## Job ID: 580-53309-1

### Laboratory: TestAmerica Seattle

#### Narrative

##### Job Narrative 580-53309-1

#### Receipt

The samples were received on 9/15/2015 9:05 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 2 coolers at receipt time were 3.9° C and 5.1° C.

#### GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### GC/MS Semi VOA

Method(s) 8270C SIM: Surrogate Terphenyl-d14 recovery for the following sample was outside control limits: BD-SP-CHEV-1 (580-53309-2). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

Method(s) 8270C SIM: The following samples were diluted to bring the concentration of target analytes within the calibration range: BD-SP-CHEV-1 (580-53309-2) and B-19-SP-CHEV (580-53309-3) at 10.0 and 10.0. Elevated reporting limits (RLs) are provided.

Method(s) 8270C SIM: The following samples were diluted due to the nature of the sample matrix: BD-SP-CHEV-1 (580-53309-2) and B-19-SP-CHEV (580-53309-3) at 50 and 50. Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### GC Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Organic Prep

Method(s) 3520C: Sample B-19-SP-CHEV (580-53309-3) did not contain a full 1-L volume

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

# Definitions/Glossary

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53309-1

## Qualifiers

### GC/MS Semi VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits

## Glossary

### Abbreviation **These commonly used abbreviations may or may not be present in this report.**

□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

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# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53309-1

## Client Sample ID: Trip Blanks

Date Collected: 09/14/15 00:00

Date Received: 09/15/15 09:05

## Lab Sample ID: 580-53309-1

Matrix: Water

### Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050		mg/L			09/17/15 17:49	1
<b>Surrogate</b>									
	%Recovery	Qualifier		Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91			50 - 150				09/17/15 17:49	1
Trifluorotoluene (Surr)	112			50 - 150				09/17/15 17:49	1

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53309-1

**Client Sample ID: BD-SP-CHEV-1**

Date Collected: 09/14/15 00:00

Date Received: 09/15/15 09:05

**Lab Sample ID: 580-53309-2**

Matrix: Water

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			09/28/15 20:30	1
Ethylbenzene	ND		3.0		ug/L			09/28/15 20:30	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/28/15 20:30	1
m-Xylene & p-Xylene	ND		3.0		ug/L			09/28/15 20:30	1
o-Xylene	ND		2.0		ug/L			09/28/15 20:30	1
Toluene	ND		2.0		ug/L			09/28/15 20:30	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	108			75 - 120				09/28/15 20:30	1
Dibromofluoromethane (Surr)	108			85 - 115				09/28/15 20:30	1
1,2-Dichloroethane-d4 (Surr)	112			70 - 120				09/28/15 20:30	1
Toluene-d8 (Surr)	105			85 - 120				09/28/15 20:30	1
Trifluorotoluene (Surr)	101			70 - 136				09/28/15 20:30	1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Anthracene	ND		0.024		ug/L		09/19/15 14:58	10/03/15 22:46	1
Fluoranthene	0.18		0.047		ug/L		09/19/15 14:58	10/03/15 22:46	1
Pyrene	0.35		0.047		ug/L		09/19/15 14:58	10/03/15 22:46	1
Benzo[a]pyrene	ND		0.0095		ug/L		09/19/15 14:58	10/03/15 22:46	1
Indeno[1,2,3-cd]pyrene	0.0096		0.0095		ug/L		09/19/15 14:58	10/03/15 22:46	1
Dibenz(a,h)anthracene	ND		0.0095		ug/L		09/19/15 14:58	10/03/15 22:46	1
Benzo[g,h,i]perylene	ND		0.0095		ug/L		09/19/15 14:58	10/03/15 22:46	1
Benzo[b]fluoranthene	ND		0.0095		ug/L		09/19/15 14:58	10/03/15 22:46	1
Benzo[k]fluoranthene	ND		0.0095		ug/L		09/19/15 14:58	10/03/15 22:46	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Terphenyl-d14	216	X		64 - 150			09/19/15 14:58	10/03/15 22:46	1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	0.60		0.095		ug/L		09/19/15 14:58	10/24/15 12:05	10
2-Methylnaphthalene	ND		0.12		ug/L		09/19/15 14:58	10/24/15 12:05	10
1-Methylnaphthalene	1.4		0.095		ug/L		09/19/15 14:58	10/24/15 12:05	10
Phenanthrene	3.1		0.95		ug/L		09/19/15 14:58	10/24/15 12:05	10
Benzo[a]anthracene	ND		0.095		ug/L		09/19/15 14:58	10/24/15 12:05	10
Chrysene	ND		0.095		ug/L		09/19/15 14:58	10/24/15 12:05	10
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Terphenyl-d14	85			64 - 150			09/19/15 14:58	10/24/15 12:05	10

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) - DL2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	ND		0.47		ug/L		09/19/15 14:58	10/26/15 17:46	50
Acenaphthene	0.93		0.47		ug/L		09/19/15 14:58	10/26/15 17:46	50
Fluorene	1.7		0.47		ug/L		09/19/15 14:58	10/26/15 17:46	50
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Terphenyl-d14	80			64 - 150			09/19/15 14:58	10/26/15 17:46	50

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53309-1

**Client Sample ID: BD-SP-CHEV-1**

Date Collected: 09/14/15 00:00

Date Received: 09/15/15 09:05

**Lab Sample ID: 580-53309-2**

Matrix: Water

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	1.1		0.050		mg/L			09/17/15 20:34	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	116		50 - 150					09/17/15 20:34	1
Trifluorotoluene (Surr)	114		50 - 150					09/17/15 20:34	1

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	4.5		0.12		mg/L		09/23/15 09:06	09/24/15 09:33	1
Motor Oil (>C24-C36)	0.84		0.27		mg/L		09/23/15 09:06	09/24/15 09:33	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	102		50 - 150				09/23/15 09:06	09/24/15 09:33	1

## Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.042		0.0050		mg/L		09/26/15 06:52	09/28/15 17:16	5
Barium	0.076		0.0060		mg/L		09/26/15 06:52	09/28/15 17:16	5
Cadmium	ND		0.0020		mg/L		09/26/15 06:52	09/28/15 17:16	5
Chromium	ND		0.0020		mg/L		09/26/15 06:52	09/28/15 17:16	5
Copper	ND		0.010		mg/L		09/26/15 06:52	09/28/15 17:16	5
Lead	ND		0.0020		mg/L		09/26/15 06:52	09/28/15 17:16	5
Manganese	4.5		0.010		mg/L		09/26/15 06:52	09/28/15 17:16	5
Selenium	ND		0.0050		mg/L		09/26/15 06:52	09/28/15 17:16	5
Silver	ND		0.0020		mg/L		09/26/15 06:52	09/28/15 17:16	5
Zinc	ND		0.035		mg/L		09/26/15 06:52	09/28/15 17:16	5

## Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		09/29/15 06:53	09/29/15 12:04	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.060		mg/L		09/18/15 10:00	09/18/15 10:00	1

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53309-1

**Client Sample ID: B-19-SP-CHEV**

**Lab Sample ID: 580-53309-3**

**Matrix: Water**

**Date Collected: 09/14/15 13:15**

**Date Received: 09/15/15 09:05**

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			09/28/15 20:57	1
Ethylbenzene	ND		3.0		ug/L			09/28/15 20:57	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/28/15 20:57	1
m-Xylene & p-Xylene	ND		3.0		ug/L			09/28/15 20:57	1
o-Xylene	ND		2.0		ug/L			09/28/15 20:57	1
Toluene	ND		2.0		ug/L			09/28/15 20:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	107		75 - 120			1
Dibromofluoromethane (Surr)	107		85 - 115			1
1,2-Dichloroethane-d4 (Surr)	105		70 - 120			1
Toluene-d8 (Surr)	108		85 - 120			1
Trifluorotoluene (Surr)	105		70 - 136			1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Phenanthrene</b>	<b>2.7</b>		0.17		ug/L		09/19/15 14:58	10/03/15 23:09	1
Anthracene	ND		0.042		ug/L		09/19/15 14:58	10/03/15 23:09	1
<b>Fluoranthene</b>	<b>0.11</b>		0.085		ug/L		09/19/15 14:58	10/03/15 23:09	1
<b>Pyrene</b>	<b>0.14</b>		0.085		ug/L		09/19/15 14:58	10/03/15 23:09	1
Benzo[a]pyrene	ND		0.017		ug/L		09/19/15 14:58	10/03/15 23:09	1
Indeno[1,2,3-cd]pyrene	ND		0.017		ug/L		09/19/15 14:58	10/03/15 23:09	1
Dibenz(a,h)anthracene	ND		0.017		ug/L		09/19/15 14:58	10/03/15 23:09	1
Benzo[g,h,i]perylene	ND		0.017		ug/L		09/19/15 14:58	10/03/15 23:09	1
Benzo[b]fluoranthene	ND		0.017		ug/L		09/19/15 14:58	10/03/15 23:09	1
Benzo[k]fluoranthene	ND		0.017		ug/L		09/19/15 14:58	10/03/15 23:09	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	85		64 - 150			1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Naphthalene</b>	<b>0.40</b>		0.17		ug/L		09/19/15 14:58	10/24/15 12:27	10
2-Methylnaphthalene	ND		0.22		ug/L		09/19/15 14:58	10/24/15 12:27	10
<b>1-Methylnaphthalene</b>	<b>2.6</b>		0.17		ug/L		09/19/15 14:58	10/24/15 12:27	10
Benzo[a]anthracene	ND		0.17		ug/L		09/19/15 14:58	10/24/15 12:27	10
Chrysene	ND		0.17		ug/L		09/19/15 14:58	10/24/15 12:27	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	86		64 - 150			10

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) - DL2

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	ND		0.85		ug/L		09/19/15 14:58	10/26/15 18:09	50
<b>Acenaphthene</b>	<b>1.5</b>		0.85		ug/L		09/19/15 14:58	10/26/15 18:09	50
Fluorene	2.6		0.85		ug/L		09/19/15 14:58	10/26/15 18:09	50

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	106		64 - 150			50

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53309-1

**Client Sample ID: B-19-SP-CHEV**

Date Collected: 09/14/15 13:15

Date Received: 09/15/15 09:05

**Lab Sample ID: 580-53309-3**

Matrix: Water

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	1.0		0.050		mg/L			09/17/15 21:08	1
Surrogate	%Recovery	Qualifier		Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	115		50 - 150					09/17/15 21:08	1
Trifluorotoluene (Surr)	113		50 - 150					09/17/15 21:08	1

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	3.8		0.12		mg/L		09/23/15 09:06	09/24/15 09:51	1
Motor Oil (>C24-C36)	0.88		0.26		mg/L		09/23/15 09:06	09/24/15 09:51	1
Surrogate	%Recovery	Qualifier		Limits			Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl	102		50 - 150				09/23/15 09:06	09/24/15 09:51	1

## Method: 6020 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.042		0.0050		mg/L		09/26/15 06:52	09/28/15 17:20	5
Barium	0.079		0.0060		mg/L		09/26/15 06:52	09/28/15 17:20	5
Cadmium	ND		0.0020		mg/L		09/26/15 06:52	09/28/15 17:20	5
Chromium	0.0039		0.0020		mg/L		09/26/15 06:52	09/28/15 17:20	5
Copper	ND		0.010		mg/L		09/26/15 06:52	09/28/15 17:20	5
Lead	ND		0.0020		mg/L		09/26/15 06:52	09/28/15 17:20	5
Manganese	4.6		0.010		mg/L		09/26/15 06:52	09/28/15 17:20	5
Selenium	ND		0.0050		mg/L		09/26/15 06:52	09/28/15 17:20	5
Silver	ND		0.0020		mg/L		09/26/15 06:52	09/28/15 17:20	5
Zinc	ND		0.035		mg/L		09/26/15 06:52	09/28/15 17:20	5

## Method: 7470A - Mercury (CVAA) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		09/29/15 06:53	09/29/15 12:11	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.060		mg/L		09/18/15 10:00	09/18/15 10:00	1

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53309-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 580-201925/5**

**Matrix: Water**

**Analysis Batch: 201925**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		2.0		ug/L			09/28/15 16:24	1
Ethylbenzene	ND		3.0		ug/L			09/28/15 16:24	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/28/15 16:24	1
m-Xylene & p-Xylene	ND		3.0		ug/L			09/28/15 16:24	1
o-Xylene	ND		2.0		ug/L			09/28/15 16:24	1
Toluene	ND		2.0		ug/L			09/28/15 16:24	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	103		75 - 120		09/28/15 16:24	1
Dibromofluoromethane (Surr)	106		85 - 115		09/28/15 16:24	1
1,2-Dichloroethane-d4 (Surr)	120		70 - 120		09/28/15 16:24	1
Toluene-d8 (Surr)	102		85 - 120		09/28/15 16:24	1
Trifluorotoluene (Surr)	97		70 - 136		09/28/15 16:24	1

**Lab Sample ID: LCS 580-201925/6**

**Matrix: Water**

**Analysis Batch: 201925**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike	LCS	LCS	D	%Rec	%Rec.	Limits
	Added	Result	Qualifier				
Benzene	20.1	16.9		ug/L	84	80 - 120	
Ethylbenzene	20.1	19.0		ug/L	94	75 - 125	
Methyl tert-butyl ether	20.0	20.0		ug/L	100	65 - 125	
m-Xylene & p-Xylene	20.0	19.0		ug/L	95	75 - 130	
o-Xylene	20.0	19.8		ug/L	99	80 - 120	
Toluene	20.0	18.6		ug/L	93	75 - 120	

Surrogate	LCSD	LCSD	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	100		75 - 120			
Dibromofluoromethane (Surr)	110		85 - 115			
1,2-Dichloroethane-d4 (Surr)	119		70 - 120			
Toluene-d8 (Surr)	104		85 - 120			
Trifluorotoluene (Surr)	100		70 - 136			

**Lab Sample ID: LCSD 580-201925/7**

**Matrix: Water**

**Analysis Batch: 201925**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike	LCSD	LCSD	D	%Rec	%Rec.	RPD	RPD Limit
	Added	Result	Qualifier					
Benzene	20.1	17.4		ug/L	87	80 - 120	3	30
Ethylbenzene	20.1	19.3		ug/L	96	75 - 125	2	30
Methyl tert-butyl ether	20.0	18.3		ug/L	91	65 - 125	9	30
m-Xylene & p-Xylene	20.0	19.5		ug/L	97	75 - 130	3	30
o-Xylene	20.0	20.1		ug/L	100	80 - 120	1	30
Toluene	20.0	18.8		ug/L	94	75 - 120	1	30

Surrogate	LCSD	LCSD	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	102		75 - 120			

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53309-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID:** LCSD 580-201925/7

**Matrix:** Water

**Analysis Batch:** 201925

**Client Sample ID:** Lab Control Sample Dup

**Prep Type:** Total/NA

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Dibromofluoromethane (Surr)	108		85 - 115
1,2-Dichloroethane-d4 (Surr)	109		70 - 120
Toluene-d8 (Surr)	104		85 - 120
Trifluorotoluene (Surr)	100		70 - 136

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

**Lab Sample ID:** MB 580-201261/1-A

**Matrix:** Water

**Analysis Batch:** 202430

**Client Sample ID:** Method Blank

**Prep Type:** Total/NA

**Prep Batch:** 201261

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	MB Result	MB Qualifier	RL	MDL	Unit		Prepared	Analyzed	
Naphthalene	ND		0.010		ug/L	09/19/15 14:58	10/03/15 16:35		1
2-Methylnaphthalene	ND		0.013		ug/L	09/19/15 14:58	10/03/15 16:35		1
1-Methylnaphthalene	ND		0.010		ug/L	09/19/15 14:58	10/03/15 16:35		1
Acenaphthylene	ND		0.010		ug/L	09/19/15 14:58	10/03/15 16:35		1
Acenaphthene	ND		0.010		ug/L	09/19/15 14:58	10/03/15 16:35		1
Fluorene	ND		0.010		ug/L	09/19/15 14:58	10/03/15 16:35		1
Phenanthrene	ND		0.10		ug/L	09/19/15 14:58	10/03/15 16:35		1
Anthracene	ND		0.025		ug/L	09/19/15 14:58	10/03/15 16:35		1
Fluoranthene	ND		0.050		ug/L	09/19/15 14:58	10/03/15 16:35		1
Pyrene	ND		0.050		ug/L	09/19/15 14:58	10/03/15 16:35		1
Benzo[a]anthracene	ND		0.010		ug/L	09/19/15 14:58	10/03/15 16:35		1
Chrysene	ND		0.010		ug/L	09/19/15 14:58	10/03/15 16:35		1
Benzo[a]pyrene	ND		0.010		ug/L	09/19/15 14:58	10/03/15 16:35		1
Indeno[1,2,3-cd]pyrene	ND		0.010		ug/L	09/19/15 14:58	10/03/15 16:35		1
Dibenz(a,h)anthracene	ND		0.010		ug/L	09/19/15 14:58	10/03/15 16:35		1
Benzo[g,h,i]perylene	ND		0.010		ug/L	09/19/15 14:58	10/03/15 16:35		1
Benzo[b]fluoranthene	ND		0.010		ug/L	09/19/15 14:58	10/03/15 16:35		1
Benzo[k]fluoranthene	ND		0.010		ug/L	09/19/15 14:58	10/03/15 16:35		1
Surrogate	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Terphenyl-d14	94			64 - 150			09/19/15 14:58	10/03/15 16:35	1

**Lab Sample ID:** LCS 580-201261/2-A

**Matrix:** Water

**Analysis Batch:** 202430

**Client Sample ID:** Lab Control Sample

**Prep Type:** Total/NA

**Prep Batch:** 201261

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits	%Rec.
	Added	Result	Qualifier	Unit				
Naphthalene	1.00	0.683		ug/L	68	68	54 - 106	
2-Methylnaphthalene	1.00	0.741		ug/L	74	54	54 - 114	
1-Methylnaphthalene	1.00	0.730		ug/L	73	57	57 - 115	
Acenaphthylene	1.00	0.667		ug/L	67	30	30 - 127	
Acenaphthene	1.00	0.680		ug/L	68	54	54 - 109	
Fluorene	1.00	0.745		ug/L	74	50	50 - 130	
Phenanthrene	1.00	0.765		ug/L	76	53	53 - 115	
Anthracene	1.00	0.533		ug/L	53	30	30 - 130	

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53309-1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

**Lab Sample ID: LCS 580-201261/2-A**

**Matrix: Water**

**Analysis Batch: 202430**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 201261**

**%Rec.**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Fluoranthene	1.00	0.710		ug/L	71	58 - 128	
Pyrene	1.00	0.683		ug/L	68	53 - 121	
Benzo[a]anthracene	1.00	0.636		ug/L	64	35 - 125	
Chrysene	1.00	0.736		ug/L	74	57 - 120	
Benzo[a]pyrene	1.00	0.531		ug/L	53	30 - 127	
Indeno[1,2,3-cd]pyrene	1.00	0.845		ug/L	85	53 - 131	
Dibenz(a,h)anthracene	1.00	0.869		ug/L	87	60 - 136	
Benzo[g,h,i]perylene	1.00	0.766		ug/L	77	51 - 128	
Benzo[b]fluoranthene	1.00	0.782		ug/L	78	59 - 126	
Benzo[k]fluoranthene	1.00	0.685		ug/L	68	49 - 136	

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Terphenyl-d14	83		64 - 150

**Lab Sample ID: LCSD 580-201261/3-A**

**Matrix: Water**

**Analysis Batch: 202430**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 201261**

**%Rec.**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Naphthalene	1.00	0.709		ug/L	71	54 - 106		4	20
2-Methylnaphthalene	1.00	0.785		ug/L	79	54 - 114		6	20
1-Methylnaphthalene	1.00	0.766		ug/L	77	57 - 115		5	20
Acenaphthylene	1.00	0.697		ug/L	70	30 - 127		4	20
Acenaphthene	1.00	0.705		ug/L	71	54 - 109		4	20
Fluorene	1.00	0.775		ug/L	77	50 - 130		4	20
Phenanthrene	1.00	0.781		ug/L	78	53 - 115		2	20
Anthracene	1.00	0.570		ug/L	57	30 - 130		7	20
Fluoranthene	1.00	0.736		ug/L	74	58 - 128		4	20
Pyrene	1.00	0.707		ug/L	71	53 - 121		3	20
Benzo[a]anthracene	1.00	0.658		ug/L	66	35 - 125		3	20
Chrysene	1.00	0.757		ug/L	76	57 - 120		3	20
Benzo[a]pyrene	1.00	0.550		ug/L	55	30 - 127		4	20
Indeno[1,2,3-cd]pyrene	1.00	0.869		ug/L	87	53 - 131		3	20
Dibenz(a,h)anthracene	1.00	0.897		ug/L	90	60 - 136		3	20
Benzo[g,h,i]perylene	1.00	0.787		ug/L	79	51 - 128		3	20
Benzo[b]fluoranthene	1.00	0.809		ug/L	81	59 - 126		3	20
Benzo[k]fluoranthene	1.00	0.709		ug/L	71	49 - 136		4	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Terphenyl-d14	87		64 - 150

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53309-1

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

**Lab Sample ID: MB 580-201089/5**

**Matrix: Water**

**Analysis Batch: 201089**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050		mg/L			09/17/15 16:09	1
<hr/>									
<b>Surrogate</b>									
4-Bromofluorobenzene (Surr)	89		50 - 150				Prepared	09/17/15 16:09	1
Trifluorotoluene (Surr)	108		50 - 150					09/17/15 16:09	1

**Lab Sample ID: LCS 580-201089/6**

**Matrix: Water**

**Analysis Batch: 201089**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	%Rec. Limits
Gasoline	1.16	1.06		mg/L		92	79 - 110
<hr/>							
<b>Surrogate</b>							
4-Bromofluorobenzene (Surr)	98		50 - 150				
Trifluorotoluene (Surr)	116		50 - 150				

**Lab Sample ID: LCSD 580-201089/7**

**Matrix: Water**

**Analysis Batch: 201089**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec.	RPD	RPD Limit
Gasoline	1.16	1.02		mg/L		88	79 - 110	5 / 20
<hr/>								
<b>Surrogate</b>								
4-Bromofluorobenzene (Surr)	96		50 - 150					
Trifluorotoluene (Surr)	110		50 - 150					

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

**Lab Sample ID: MB 580-201493/1-A**

**Matrix: Water**

**Analysis Batch: 201519**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 201493**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.11		mg/L		09/23/15 09:06	09/23/15 22:53	1
Motor Oil (>C24-C36)	ND		0.25		mg/L		09/23/15 09:06	09/23/15 22:53	1
<hr/>									
<b>Surrogate</b>									
o-Terphenyl	54		50 - 150				Prepared	09/23/15 09:06	09/23/15 22:53

**Lab Sample ID: LCS 580-201493/2-A**

**Matrix: Water**

**Analysis Batch: 201519**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 201493**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	%Rec. Limits
#2 Diesel (C10-C24)	0.500	0.470		mg/L		94	59 - 120

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53309-1

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

**Lab Sample ID: LCS 580-201493/2-A**

**Matrix: Water**

**Analysis Batch: 201519**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 201493**

**%Rec.**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	Limits
Motor Oil (>C24-C36)	0.502	0.501		mg/L	100	71 - 140	
<b>Surrogate</b>							
<i>o-Terphenyl</i>	91						
		50 - 150					

**Lab Sample ID: LCSD 580-201493/3-A**

**Matrix: Water**

**Analysis Batch: 201519**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 201493**

**%Rec.**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec.	RPD	Limit
#2 Diesel (C10-C24)	0.500	0.458		mg/L	92	59 - 120	2	27
Motor Oil (>C24-C36)	0.502	0.500		mg/L	100	71 - 140	0	27
<b>Surrogate</b>								
<i>o-Terphenyl</i>	84							
		50 - 150						

## Method: 6020 - Metals (ICP/MS)

**Lab Sample ID: MB 580-201816/21-A**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Method Blank**

**Prep Type: Total Recoverable**

**Prep Batch: 201816**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0010		mg/L		09/26/15 06:52	09/28/15 13:28	1
Barium	ND		0.0012		mg/L		09/26/15 06:52	09/28/15 13:28	1
Cadmium	ND		0.00040		mg/L		09/26/15 06:52	09/28/15 13:28	1
Chromium	ND		0.00040		mg/L		09/26/15 06:52	09/28/15 13:28	1
Copper	ND		0.0020		mg/L		09/26/15 06:52	09/28/15 13:28	1
Lead	ND		0.00040		mg/L		09/26/15 06:52	09/28/15 13:28	1
Manganese	ND		0.0020		mg/L		09/26/15 06:52	09/28/15 13:28	1
Selenium	ND		0.0010		mg/L		09/26/15 06:52	09/28/15 13:28	1
Silver	ND		0.00040		mg/L		09/26/15 06:52	09/28/15 13:28	1
Zinc	ND		0.0070		mg/L		09/26/15 06:52	09/28/15 13:28	1

**Lab Sample ID: LCS 580-201816/22-A**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total Recoverable**

**Prep Batch: 201816**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	Limits
Arsenic	4.00	4.11		mg/L		103	80 - 120
Barium	4.00	4.19		mg/L		105	80 - 120
Cadmium	0.100	0.105		mg/L		105	80 - 120
Chromium	0.400	0.407		mg/L		102	80 - 120
Copper	0.500	0.514		mg/L		103	80 - 120
Lead	1.00	0.947		mg/L		95	80 - 120
Manganese	1.00	1.02		mg/L		102	80 - 120
Selenium	4.00	4.21		mg/L		105	80 - 120
Silver	0.600	0.590		mg/L		98	80 - 120

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53309-1

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: LCS 580-201816/22-A**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total Recoverable**

**Prep Batch: 201816**

**%Rec.**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	Limits
Zinc	4.00	4.07		mg/L	102	80 - 120	

**Lab Sample ID: LCSD 580-201816/23-A**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total Recoverable**

**Prep Batch: 201816**

**%Rec.**

**RPD**  
**Limit**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec.	Limits	RPD	Limit
Arsenic	4.00	4.12		mg/L	103	80 - 120		0	20
Barium	4.00	4.18		mg/L	105	80 - 120		0	20
Cadmium	0.100	0.101		mg/L	101	80 - 120		3	20
Chromium	0.400	0.406		mg/L	101	80 - 120		0	20
Copper	0.500	0.506		mg/L	101	80 - 120		2	20
Lead	1.00	0.950		mg/L	95	80 - 120		0	20
Manganese	1.00	1.03		mg/L	103	80 - 120		1	20
Selenium	4.00	4.19		mg/L	105	80 - 120		1	20
Silver	0.600	0.592		mg/L	99	80 - 120		0	20
Zinc	4.00	4.05		mg/L	101	80 - 120		0	20

**Lab Sample ID: 580-53416-J-10-C MS**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Matrix Spike**

**Prep Type: Total Recoverable**

**Prep Batch: 201816**

**%Rec.**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec.	Limits
Arsenic	0.0061		4.00	4.63		mg/L	116	80 - 120	
Barium	0.015		4.00	4.64		mg/L	116	80 - 120	
Cadmium	ND		0.100	0.120		mg/L	120	80 - 120	
Chromium	ND		0.400	0.457		mg/L	114	80 - 120	
Copper	ND		0.500	0.575		mg/L	115	80 - 120	
Lead	ND		1.00	1.09		mg/L	109	80 - 120	
Manganese	1.7		1.00	2.87		mg/L	117	80 - 120	
Selenium	ND		4.00	4.71		mg/L	118	80 - 120	
Silver	ND		0.600	0.640		mg/L	107	80 - 120	
Zinc	ND		4.00	4.61		mg/L	115	80 - 120	

**Lab Sample ID: 580-53416-J-10-D MSD**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total Recoverable**

**Prep Batch: 201816**

**%Rec.**

**RPD**  
**Limit**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	Limits	RPD	Limit
Arsenic	0.0061		4.00	4.48		mg/L	112	80 - 120		3	20
Barium	0.015		4.00	4.48		mg/L	112	80 - 120		3	20
Cadmium	ND		0.100	0.115		mg/L	115	80 - 120		5	20
Chromium	ND		0.400	0.450		mg/L	112	80 - 120		2	20
Copper	ND		0.500	0.555		mg/L	111	80 - 120		4	20
Lead	ND		1.00	1.05		mg/L	105	80 - 120		4	20
Manganese	1.7		1.00	2.78		mg/L	108	80 - 120		3	20
Selenium	ND		4.00	4.52		mg/L	113	80 - 120		4	20
Silver	ND		0.600	0.617		mg/L	103	80 - 120		4	20
Zinc	ND		4.00	4.39		mg/L	110	80 - 120		5	20

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53309-1

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: 580-53416-J-10-B DU**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Duplicate**

**Prep Type: Total Recoverable**

**Prep Batch: 201816**

**RPD**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Arsenic	0.0061		0.00626		mg/L		2	20
Barium	0.015		0.0154		mg/L		0.3	20
Cadmium	ND		ND		mg/L		NC	20
Chromium	ND		ND		mg/L		NC	20
Copper	ND		ND		mg/L		NC	20
Lead	ND		ND		mg/L		NC	20
Manganese	1.7		1.65		mg/L		3	20
Selenium	ND		ND		mg/L		NC	20
Silver	ND		ND		mg/L		NC	20
Zinc	ND		ND		mg/L		NC	20

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 580-201962/21-A**

**Matrix: Water**

**Analysis Batch: 202007**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 201962**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		09/29/15 06:53	09/29/15 11:15	1

**Lab Sample ID: LCS 580-201962/22-A**

**Matrix: Water**

**Analysis Batch: 202007**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 201962**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.
Mercury	0.00200	0.00173		mg/L		87	80 - 120
Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits

**Lab Sample ID: LCSD 580-201962/23-A**

**Matrix: Water**

**Analysis Batch: 202007**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 201962**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.
Mercury	0.00200	0.00179		mg/L		89	80 - 120
Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	RPD

**Lab Sample ID: 580-53389-C-1-D MS**

**Matrix: Water**

**Analysis Batch: 202007**

**Client Sample ID: Matrix Spike**

**Prep Type: Total/NA**

**Prep Batch: 201962**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec.
Mercury	ND		0.00200	0.00180		mg/L		90	80 - 120
Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits

**Lab Sample ID: 580-53389-C-1-E MSD**

**Matrix: Water**

**Analysis Batch: 202007**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total/NA**

**Prep Batch: 201962**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec.
Mercury	ND		0.00200	0.00178		mg/L		89	80 - 120
Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	RPD

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53309-1

## Method: 7470A - Mercury (CVAA) (Continued)

**Lab Sample ID:** 580-53389-C-1-C DU

**Matrix:** Water

**Analysis Batch:** 202007

**Client Sample ID:** Duplicate

**Prep Type:** Total/NA

**Prep Batch:** 201962

**RPD**

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Mercury	ND		ND		mg/L		NC	20

## Method: SM 4500 CN E - Cyanide, Total

**Lab Sample ID:** MB 580-201183/1-A

**Matrix:** Water

**Analysis Batch:** 201184

**Client Sample ID:** Method Blank

**Prep Type:** Total/NA

**Prep Batch:** 201183

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Cyanide, Total	ND		0.060		mg/L		09/18/15 10:00	09/18/15 10:00	1

**Lab Sample ID:** LCS 580-201183/2-A

**Matrix:** Water

**Analysis Batch:** 201184

**Client Sample ID:** Lab Control Sample

**Prep Type:** Total/NA

**Prep Batch:** 201183

**%Rec.**

Analyte	Spike	LCS	LCS	Unit	D	%Rec	Limits
	Added	Result	Qualifier				
Cyanide, Total	0.500	0.490		mg/L		98	90 - 110

**Lab Sample ID:** 580-53313-D-1-C MS

**Matrix:** Water

**Analysis Batch:** 201184

**Client Sample ID:** Matrix Spike

**Prep Type:** Total/NA

**Prep Batch:** 201183

**%Rec.**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	Limits
	Result	Qualifier	Added	Result	Qualifier				
Cyanide, Total	ND		0.500	0.486		mg/L		97	90 - 110

**Lab Sample ID:** 580-53313-D-1-D MSD

**Matrix:** Water

**Analysis Batch:** 201184

**Client Sample ID:** Matrix Spike Duplicate

**Prep Type:** Total/NA

**Prep Batch:** 201183

**%Rec.**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier						
Cyanide, Total	ND		0.500	0.487		mg/L		97	90 - 110	0	10

**Lab Sample ID:** 580-53313-D-1-B DU

**Matrix:** Water

**Analysis Batch:** 201184

**Client Sample ID:** Duplicate

**Prep Type:** Total/NA

**Prep Batch:** 201183

**RPD**

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Cyanide, Total	ND		ND		mg/L		NC	10

TestAmerica Seattle

# Lab Chronicle

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53309-1

**Client Sample ID: Trip Blanks**

Date Collected: 09/14/15 00:00

Date Received: 09/15/15 09:05

**Lab Sample ID: 580-53309-1**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	NWTPH-Gx		1	201089	09/17/15 17:49	CJ	TAL SEA

**Client Sample ID: BD-SP-CHEV-1**

Date Collected: 09/14/15 00:00

Date Received: 09/15/15 09:05

**Lab Sample ID: 580-53309-2**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	201925	09/28/15 20:30	TL1	TAL SEA
Total/NA	Prep	3520C			201261	09/19/15 14:58	JDR	TAL SEA
Total/NA	Analysis	8270C SIM		1	202430	10/03/15 22:46	AHP	TAL SEA
Total/NA	Prep	3520C	DL		201261	09/19/15 14:58	JDR	TAL SEA
Total/NA	Analysis	8270C SIM	DL	10	204170	10/24/15 12:05	ERZ	TAL SEA
Total/NA	Prep	3520C	DL2		201261	09/19/15 14:58	JDR	TAL SEA
Total/NA	Analysis	8270C SIM	DL2	50	204237	10/26/15 17:46	ERZ	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	201089	09/17/15 20:34	CJ	TAL SEA
Total/NA	Prep	3510C			201493	09/23/15 09:06	DCC	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	201519	09/24/15 09:33	KW	TAL SEA
Dissolved	Prep	3005A			201816	09/26/15 06:52	MKN	TAL SEA
Dissolved	Analysis	6020		5	201970	09/28/15 17:16	FCW	TAL SEA
Dissolved	Prep	7470A			201962	09/29/15 06:53	MKN	TAL SEA
Dissolved	Analysis	7470A		1	202007	09/29/15 12:04	FCW	TAL SEA
Total/NA	Analysis	SM 4500 CN E		1	201184	09/18/15 10:00	JLS	TAL SEA
Total/NA	Prep	Distill/CN			201183	09/18/15 10:00	JLS	TAL SEA

**Client Sample ID: B-19-SP-CHEV**

Date Collected: 09/14/15 13:15

Date Received: 09/15/15 09:05

**Lab Sample ID: 580-53309-3**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	201925	09/28/15 20:57	TL1	TAL SEA
Total/NA	Prep	3520C			201261	09/19/15 14:58	JDR	TAL SEA
Total/NA	Analysis	8270C SIM		1	202430	10/03/15 23:09	AHP	TAL SEA
Total/NA	Prep	3520C	DL		201261	09/19/15 14:58	JDR	TAL SEA
Total/NA	Analysis	8270C SIM	DL	10	204170	10/24/15 12:27	ERZ	TAL SEA
Total/NA	Prep	3520C	DL2		201261	09/19/15 14:58	JDR	TAL SEA
Total/NA	Analysis	8270C SIM	DL2	50	204237	10/26/15 18:09	ERZ	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	201089	09/17/15 21:08	CJ	TAL SEA
Total/NA	Prep	3510C			201493	09/23/15 09:06	DCC	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	201519	09/24/15 09:51	KW	TAL SEA
Dissolved	Prep	3005A			201816	09/26/15 06:52	MKN	TAL SEA
Dissolved	Analysis	6020		5	201970	09/28/15 17:20	FCW	TAL SEA
Dissolved	Prep	7470A			201962	09/29/15 06:53	MKN	TAL SEA
Dissolved	Analysis	7470A		1	202007	09/29/15 12:11	FCW	TAL SEA

TestAmerica Seattle

# Lab Chronicle

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53309-1

**Client Sample ID: B-19-SP-CHEV**

**Date Collected: 09/14/15 13:15**

**Date Received: 09/15/15 09:05**

**Lab Sample ID: 580-53309-3**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM 4500 CN E		1	201184	09/18/15 10:00	JLS	TAL SEA
Total/NA	Prep	Distill/CN			201183	09/18/15 10:00	JLS	TAL SEA

**Laboratory References:**

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

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TestAmerica Seattle

## Certification Summary

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53309-1

### Laboratory: TestAmerica Seattle

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-022	03-02-16
California	State Program	9	2901	01-31-17
L-A-B	DoD ELAP		L2236	01-19-16
L-A-B	ISO/IEC 17025		L2236	01-19-16
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-06-16
US Fish & Wildlife	Federal		LE058448-0	02-28-16
USDA	Federal		P330-14-00126	04-08-17
Washington	State Program	10	C553	02-17-16

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TestAmerica Seattle

## Sample Summary

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53309-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-53309-1	Trip Blanks	Water	09/14/15 00:00	09/15/15 09:05
580-53309-2	BD-SP-CHEV-1	Water	09/14/15 00:00	09/15/15 09:05
580-53309-3	B-19-SP-CHEV	Water	09/14/15 13:15	09/15/15 09:05

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TestAmerica Seattle

# TestAmerica Portland

94 NW Ninbus Avenue

Beaverton, OR 97008  
Phone: 503.906.9200 Fax:

## Chain of Cu



580-53309 Chain of Custody

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**TestAmerica**

THE LEADER IN ENVIRONMENTAL TESTING  
TestAmerica Laboratories, Inc.

TAL-8210 (0713)

Regulatory Program:  DW  NPDES  RCR

Client Contact		Project Manager: LYNNE FENLEY		Site Contact: BRIAN FLEMISTER		Date: 9/15/15	COC No:				
Company Name: ARCADIS		Tel/Fax: 503.220.8201 x114		Lab Contact: SARAH MURPHY		Carrier:	1 of 1 COCs				
Address: 115 SW COLUMBIA ST STE 670		Analysis Turnaround Time					Sampler: M. Armstrong				
City/State/Zip: PORTLAND OR 97201		<input type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS					For Lab Use Only:				
Phone: 503.220.8201 x		TAT if different from Below					Walk-in Client:				
Fax:		2 weeks					Lab Sampling:				
Project Name: 3Q2015 WILLBRIDGE		1 week					Job / SDG No.:				
Site:		2 days									
PO #Z00460601 0012,00420		1 day									
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filter/Prepared Sample Y/N	Permeable Sample Y/N	MSD Y/N	Sample Specific Notes:	
TRIP BLANKS		—	—	✓	W	I	X	X	X		
BD-SP-CHEV-I		9/14/15	—	G	W	II	X	X	XX		
B-19-SP-CHEV		9/14/15	13:15	G	W	II	X	X	XX		
Preservation Used: 1=Ice 2=HCl 3=H <sub>2</sub> SO <sub>4</sub> 4=HNO <sub>3</sub> 5=NaOH 6=Other											
Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)					
<input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown						<input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Disposal by Lab <input type="checkbox"/> Archive for _____ Months					
Special Instructions/QC Requirements & Comments: <i>INCLUDING RCRA 8, Zn/CU INCLUDING 2-METHYLNDPENTENE</i> <i>PLEASE SEND REPORT TO: BRIAN.FLEMISTER@ARCADIS-US.COM AND BRIAN.MARCUS@ARCADIS-US.COM</i>											
Custody Seals Intact: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Custody Seal No.:		Cooler Temp. (°C): Obs'd:		Corr'd:		Therm ID No.:			
Relinquished by: <i>Meg Armstrong</i>		Company: ARCADIS		Date/Time: 9/15/15 0840		Received by: Brian Murphy		Company: M.E.		Date/Time: 9/15/15 0840	
Relinquished by: <i>Verica Mjt</i>		Company: M.E.		Date/Time: 9/15/15		Received by: J.D. M.		Company: TAP		Date/Time: 9/15/15 @ 0905	
Relinquished by:		Company:		Date/Time:		Received in Laboratory by:		Company:		Date/Time:	

## Login Sample Receipt Checklist

Client: ARCADIS U.S. Inc

Job Number: 580-53309-1

**Login Number: 53309**

**List Source: TestAmerica Seattle**

**List Number: 1**

**Creator: Svabik-Seror, Philip M**

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Seattle  
5755 8th Street East  
Tacoma, WA 98424  
Tel: (253)922-2310

TestAmerica Job ID: 580-53489-1

Client Project/Site: 3Q2015 GWM B0045452.0018.00420

For:  
ARCADIS U.S. Inc  
111 SW Columbia Street  
Suite 670  
Portland, Oregon 97201

Attn: Brian Marcum

*Sarah Murphy*

Authorized for release by:  
10/31/2015 11:17:38 AM

Sarah Murphy, Project Manager I  
(253)922-2310  
[sarah.murphy@testamericainc.com](mailto:sarah.murphy@testamericainc.com)

### LINKS

Review your project  
results through

Total Access

Have a Question?

Ask  
The  
Expert

Visit us at:

[www.testamericainc.com](http://www.testamericainc.com)

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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# Case Narrative

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 GWM B0045452.0018.00420

TestAmerica Job ID: 580-53489-1

## Job ID: 580-53489-1

### Laboratory: TestAmerica Seattle

#### Narrative

#### Job Narrative 580-53489-1

#### Receipt

The samples were received on 9/21/2015 3:00 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 3.7° C.

#### GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### GC/MS Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### GC Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### General Chemistry

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Definitions/Glossary

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 GWM B0045452.0018.00420

TestAmerica Job ID: 580-53489-1

## Glossary

**Abbreviation** These commonly used abbreviations may or may not be present in this report.

□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

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# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 GWM B0045452.0018.00420

TestAmerica Job ID: 580-53489-1

**Client Sample ID: Trip Blank**

Date Collected: 09/21/15 00:00

Date Received: 09/21/15 15:00

**Lab Sample ID: 580-53489-1**

Matrix: Water

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050		mg/L			09/28/15 16:10	1
<b>Surrogate</b>									
	%Recovery	Qualifier		Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	94			50 - 150				09/28/15 16:10	1
Trifluorotoluene (Surr)	102			50 - 150				09/28/15 16:10	1

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 GWM B0045452.0018.00420

TestAmerica Job ID: 580-53489-1

**Client Sample ID: EB-SP-CHEV-1**

**Lab Sample ID: 580-53489-2**

**Matrix: Water**

Date Collected: 09/21/15 12:30

Date Received: 09/21/15 15:00

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			10/02/15 16:59	1
Ethylbenzene	ND		3.0		ug/L			10/02/15 16:59	1
Methyl tert-butyl ether	ND		1.0		ug/L			10/02/15 16:59	1
m-Xylene & p-Xylene	ND		3.0		ug/L			10/02/15 16:59	1
o-Xylene	ND		2.0		ug/L			10/02/15 16:59	1
Toluene	ND		2.0		ug/L			10/02/15 16:59	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	109			75 - 120				10/02/15 16:59	1
Dibromofluoromethane (Surr)	103			85 - 115				10/02/15 16:59	1
1,2-Dichloroethane-d4 (Surr)	110			70 - 120				10/02/15 16:59	1
Toluene-d8 (Surr)	99			85 - 120				10/02/15 16:59	1
Trifluorotoluene (Surr)	102			70 - 136				10/02/15 16:59	1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	0.014		0.010		ug/L		09/26/15 14:45	10/07/15 22:05	1
2-Methylnaphthalene	ND		0.013		ug/L		09/26/15 14:45	10/07/15 22:05	1
1-Methylnaphthalene	ND		0.010		ug/L		09/26/15 14:45	10/07/15 22:05	1
Acenaphthylene	ND		0.010		ug/L		09/26/15 14:45	10/07/15 22:05	1
Acenaphthene	ND		0.010		ug/L		09/26/15 14:45	10/07/15 22:05	1
Fluorene	ND		0.010		ug/L		09/26/15 14:45	10/07/15 22:05	1
Phenanthrene	ND		0.10		ug/L		09/26/15 14:45	10/07/15 22:05	1
Anthracene	ND		0.025		ug/L		09/26/15 14:45	10/07/15 22:05	1
Fluoranthene	ND		0.050		ug/L		09/26/15 14:45	10/07/15 22:05	1
Pyrene	ND		0.050		ug/L		09/26/15 14:45	10/07/15 22:05	1
Benzo[a]anthracene	ND		0.010		ug/L		09/26/15 14:45	10/07/15 22:05	1
Chrysene	ND		0.010		ug/L		09/26/15 14:45	10/07/15 22:05	1
Benzo[a]pyrene	ND		0.010		ug/L		09/26/15 14:45	10/07/15 22:05	1
Indeno[1,2,3-cd]pyrene	ND		0.010		ug/L		09/26/15 14:45	10/07/15 22:05	1
Dibenz(a,h)anthracene	ND		0.010		ug/L		09/26/15 14:45	10/07/15 22:05	1
Benzo[g,h,i]perylene	ND		0.010		ug/L		09/26/15 14:45	10/07/15 22:05	1
Benzo[b]fluoranthene	ND		0.010		ug/L		09/26/15 14:45	10/07/15 22:05	1
Benzo[k]fluoranthene	ND		0.010		ug/L		09/26/15 14:45	10/07/15 22:05	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Terphenyl-d14	87			64 - 150				09/26/15 14:45	10/07/15 22:05

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050		mg/L			09/28/15 21:08	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	93			50 - 150				09/28/15 21:08	1
Trifluorotoluene (Surr)	99			50 - 150				09/28/15 21:08	1

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.12		mg/L		09/25/15 16:18	09/28/15 22:44	1
Motor Oil (>C24-C36)	ND		0.26		mg/L		09/25/15 16:18	09/28/15 22:44	1

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 GWM B0045452.0018.00420

TestAmerica Job ID: 580-53489-1

**Client Sample ID: EB-SP-CHEV-1**

Date Collected: 09/21/15 12:30

Date Received: 09/21/15 15:00

**Lab Sample ID: 580-53489-2**

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o-Terphenyl</i>	73		50 - 150	09/25/15 16:18	09/28/15 22:44	1

## Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0050		mg/L		09/28/15 13:59	09/29/15 02:20	5
Barium	ND		0.0060		mg/L		09/28/15 13:59	09/29/15 02:20	5
Cadmium	ND		0.0020		mg/L		09/28/15 13:59	09/29/15 02:20	5
Chromium	ND		0.0020		mg/L		09/28/15 13:59	09/29/15 02:20	5
Copper	ND		0.010		mg/L		09/28/15 13:59	09/29/15 02:20	5
Lead	ND		0.0020		mg/L		09/28/15 13:59	09/29/15 02:20	5
Manganese	ND		0.010		mg/L		09/28/15 13:59	09/29/15 02:20	5
Selenium	ND		0.0050		mg/L		09/28/15 13:59	09/29/15 02:20	5
Silver	ND		0.0020		mg/L		09/28/15 13:59	09/29/15 02:20	5
Zinc	ND		0.035		mg/L		09/28/15 13:59	09/29/15 02:20	5

## Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		10/01/15 09:51	10/01/15 18:08	1

## General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.060		mg/L		09/24/15 15:15	09/24/15 15:15	1

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 GWM B0045452.0018.00420

TestAmerica Job ID: 580-53489-1

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 580-202326/4**

**Matrix: Water**

**Analysis Batch: 202326**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		2.0		ug/L			10/02/15 12:44	1
Ethylbenzene	ND		3.0		ug/L			10/02/15 12:44	1
Methyl tert-butyl ether	ND		1.0		ug/L			10/02/15 12:44	1
m-Xylene & p-Xylene	ND		3.0		ug/L			10/02/15 12:44	1
o-Xylene	ND		2.0		ug/L			10/02/15 12:44	1
Toluene	ND		2.0		ug/L			10/02/15 12:44	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	106		75 - 120		10/02/15 12:44	1
Dibromofluoromethane (Surr)	104		85 - 115		10/02/15 12:44	1
1,2-Dichloroethane-d4 (Surr)	106		70 - 120		10/02/15 12:44	1
Toluene-d8 (Surr)	98		85 - 120		10/02/15 12:44	1
Trifluorotoluene (Surr)	104		70 - 136		10/02/15 12:44	1

**Lab Sample ID: LCS 580-202326/5**

**Matrix: Water**

**Analysis Batch: 202326**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike	LCS	LCS	D	%Rec	%Rec.	Limits
	Added	Result	Qualifier				
Benzene	20.1	18.0		ug/L	90	80 - 120	
Ethylbenzene	20.1	18.7		ug/L	93	75 - 125	
Methyl tert-butyl ether	20.0	18.8		ug/L	94	65 - 125	
m-Xylene & p-Xylene	20.0	18.8		ug/L	94	75 - 130	
o-Xylene	20.0	18.7		ug/L	94	80 - 120	
Toluene	20.0	18.0		ug/L	90	75 - 120	

Surrogate	LCSD	LCSD	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	108		75 - 120			
Dibromofluoromethane (Surr)	103		85 - 115			
1,2-Dichloroethane-d4 (Surr)	101		70 - 120			
Toluene-d8 (Surr)	97		85 - 120			
Trifluorotoluene (Surr)	105		70 - 136			

**Lab Sample ID: LCSD 580-202326/6**

**Matrix: Water**

**Analysis Batch: 202326**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike	LCSD	LCSD	D	%Rec	%Rec.	RPD	RPD Limit
	Added	Result	Qualifier					
Benzene	20.1	17.0		ug/L	85	80 - 120	6	30
Ethylbenzene	20.1	17.3		ug/L	86	75 - 125	8	30
Methyl tert-butyl ether	20.0	19.7		ug/L	98	65 - 125	5	30
m-Xylene & p-Xylene	20.0	17.5		ug/L	87	75 - 130	7	30
o-Xylene	20.0	17.2		ug/L	86	80 - 120	8	30
Toluene	20.0	16.5		ug/L	82	75 - 120	9	30

Surrogate	LCSD	LCSD	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	104		75 - 120			

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 GWM B0045452.0018.00420

TestAmerica Job ID: 580-53489-1

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 580-202326/6**

**Matrix: Water**

**Analysis Batch: 202326**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Dibromofluoromethane (Surr)	105		85 - 115
1,2-Dichloroethane-d4 (Surr)	103		70 - 120
Toluene-d8 (Surr)	95		85 - 120
Trifluorotoluene (Surr)	104		70 - 136

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

**Lab Sample ID: MB 580-201840/1-A**

**Matrix: Water**

**Analysis Batch: 202697**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 201840**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.010		ug/L	09/26/15 14:44	10/07/15 18:37		1
2-Methylnaphthalene	ND		0.013		ug/L	09/26/15 14:44	10/07/15 18:37		1
1-Methylnaphthalene	ND		0.010		ug/L	09/26/15 14:44	10/07/15 18:37		1
Acenaphthylene	ND		0.010		ug/L	09/26/15 14:44	10/07/15 18:37		1
Acenaphthene	ND		0.010		ug/L	09/26/15 14:44	10/07/15 18:37		1
Fluorene	ND		0.010		ug/L	09/26/15 14:44	10/07/15 18:37		1
Phenanthrene	ND		0.10		ug/L	09/26/15 14:44	10/07/15 18:37		1
Anthracene	ND		0.025		ug/L	09/26/15 14:44	10/07/15 18:37		1
Fluoranthene	ND		0.050		ug/L	09/26/15 14:44	10/07/15 18:37		1
Pyrene	ND		0.050		ug/L	09/26/15 14:44	10/07/15 18:37		1
Benzo[a]anthracene	ND		0.010		ug/L	09/26/15 14:44	10/07/15 18:37		1
Chrysene	ND		0.010		ug/L	09/26/15 14:44	10/07/15 18:37		1
Benzo[a]pyrene	ND		0.010		ug/L	09/26/15 14:44	10/07/15 18:37		1
Indeno[1,2,3-cd]pyrene	ND		0.010		ug/L	09/26/15 14:44	10/07/15 18:37		1
Dibenz(a,h)anthracene	ND		0.010		ug/L	09/26/15 14:44	10/07/15 18:37		1
Benzo[g,h,i]perylene	ND		0.010		ug/L	09/26/15 14:44	10/07/15 18:37		1
Benzo[b]fluoranthene	ND		0.010		ug/L	09/26/15 14:44	10/07/15 18:37		1
Benzo[k]fluoranthene	ND		0.010		ug/L	09/26/15 14:44	10/07/15 18:37		1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	90		64 - 150	09/26/15 14:44	10/07/15 18:37	1

**Lab Sample ID: LCS 580-201840/2-A**

**Matrix: Water**

**Analysis Batch: 202697**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 201840**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Naphthalene	1.00	0.655		ug/L	66	54 - 106	
2-Methylnaphthalene	1.00	0.748		ug/L	75	54 - 114	
1-Methylnaphthalene	1.00	0.732		ug/L	73	57 - 115	
Acenaphthylene	1.00	0.651		ug/L	65	30 - 127	
Acenaphthene	1.00	0.658		ug/L	66	54 - 109	
Fluorene	1.00	0.769		ug/L	77	50 - 130	
Phenanthrene	1.00	0.728		ug/L	73	53 - 115	
Anthracene	1.00	0.437		ug/L	44	30 - 130	

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 GWM B0045452.0018.00420

TestAmerica Job ID: 580-53489-1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

**Lab Sample ID: LCS 580-201840/2-A**

**Matrix: Water**

**Analysis Batch: 202697**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 201840**

**%Rec.**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Fluoranthene	1.00	0.722		ug/L	72	58 - 128	
Pyrene	1.00	0.685		ug/L	68	53 - 121	
Benzo[a]anthracene	1.00	0.607		ug/L	61	35 - 125	
Chrysene	1.00	0.710		ug/L	71	57 - 120	
Benzo[a]pyrene	1.00	0.441		ug/L	44	30 - 127	
Indeno[1,2,3-cd]pyrene	1.00	0.757		ug/L	76	53 - 131	
Dibenz(a,h)anthracene	1.00	0.762		ug/L	76	60 - 136	
Benzo[g,h,i]perylene	1.00	0.650		ug/L	65	51 - 128	
Benzo[b]fluoranthene	1.00	0.870		ug/L	87	59 - 126	
Benzo[k]fluoranthene	1.00	0.784		ug/L	78	49 - 136	

Surrogate	LCS %Recovery	LCS Qualifier	Limits
Terphenyl-d14	85		64 - 150

**Lab Sample ID: LCSD 580-201840/3-A**

**Matrix: Water**

**Analysis Batch: 202697**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 201840**

**%Rec.**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Naphthalene	1.00	0.615		ug/L	61	54 - 106		6	20
2-Methylnaphthalene	1.00	0.693		ug/L	69	54 - 114		8	20
1-Methylnaphthalene	1.00	0.676		ug/L	68	57 - 115		8	20
Acenaphthylene	1.00	0.598		ug/L	60	30 - 127		9	20
Acenaphthene	1.00	0.613		ug/L	61	54 - 109		7	20
Fluorene	1.00	0.682		ug/L	68	50 - 130		12	20
Phenanthrene	1.00	0.694		ug/L	69	53 - 115		5	20
Anthracene	1.00	0.357		ug/L	36	30 - 130		20	20
Fluoranthene	1.00	0.696		ug/L	70	58 - 128		4	20
Pyrene	1.00	0.661		ug/L	66	53 - 121		3	20
Benzo[a]anthracene	1.00	0.547		ug/L	55	35 - 125		10	20
Chrysene	1.00	0.662		ug/L	66	57 - 120		7	20
Benzo[a]pyrene	1.00	0.406		ug/L	41	30 - 127		8	20
Indeno[1,2,3-cd]pyrene	1.00	0.839		ug/L	84	53 - 131		10	20
Dibenz(a,h)anthracene	1.00	0.849		ug/L	85	60 - 136		11	20
Benzo[g,h,i]perylene	1.00	0.727		ug/L	73	51 - 128		11	20
Benzo[b]fluoranthene	1.00	0.963		ug/L	96	59 - 126		10	20
Benzo[k]fluoranthene	1.00	0.862		ug/L	86	49 - 136		9	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Terphenyl-d14	82		64 - 150

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 GWM B0045452.0018.00420

TestAmerica Job ID: 580-53489-1

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

**Lab Sample ID: MB 580-201867/5**

**Matrix: Water**

**Analysis Batch: 201867**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050		mg/L			09/28/15 13:58	1
<hr/>									
<b>Surrogate</b>									
4-Bromofluorobenzene (Surr)	%Recovery 94	MB Qualifier	Limits 50 - 150				Prepared	Analyzed 09/28/15 13:58	1
Trifluorotoluene (Surr)	103		50 - 150					09/28/15 13:58	1

**Lab Sample ID: LCS 580-201867/6**

**Matrix: Water**

**Analysis Batch: 201867**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	%Rec. Limits
Gasoline	1.16	1.05		mg/L		91	79 - 110
<hr/>							
<b>Surrogate</b>							
4-Bromofluorobenzene (Surr)	%Recovery 98	LCS Qualifier	Limits 50 - 150				
Trifluorotoluene (Surr)	107		50 - 150				

**Lab Sample ID: LCSD 580-201867/7**

**Matrix: Water**

**Analysis Batch: 201867**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec.	RPD	RPD Limit
Gasoline	1.16	1.08		mg/L		93	79 - 110	2
<hr/>								
<b>Surrogate</b>								
4-Bromofluorobenzene (Surr)	%Recovery 101	LCSD Qualifier	Limits 50 - 150					
Trifluorotoluene (Surr)	110		50 - 150					

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

**Lab Sample ID: MB 580-201788/1-A**

**Matrix: Water**

**Analysis Batch: 201835**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 201788**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.11		mg/L		09/25/15 16:18	09/28/15 21:50	1
Motor Oil (>C24-C36)	ND		0.25		mg/L		09/25/15 16:18	09/28/15 21:50	1
<hr/>									
<b>Surrogate</b>									
o-Terphenyl	%Recovery 62	MB Qualifier	Limits 50 - 150				Prepared 09/25/15 16:18	Analyzed 09/28/15 21:50	1

**Lab Sample ID: LCS 580-201788/2-A**

**Matrix: Water**

**Analysis Batch: 201835**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**  
**Prep Batch: 201788**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	%Rec. Limits
#2 Diesel (C10-C24)	0.500	0.421		mg/L		84	59 - 120

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 GWM B0045452.0018.00420

TestAmerica Job ID: 580-53489-1

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

**Lab Sample ID: LCS 580-201788/2-A**

**Matrix: Water**

**Analysis Batch: 201835**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 201788**

**%Rec.**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Motor Oil (>C24-C36)	0.502	0.457		mg/L		91	71 - 140
<b>Surrogate</b>							
<i>o-Terphenyl</i>	78						

**Lab Sample ID: LCSD 580-201788/3-A**

**Matrix: Water**

**Analysis Batch: 201835**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 201788**

**%Rec.**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
#2 Diesel (C10-C24)	0.500	0.390		mg/L		78	59 - 120	7	27
Motor Oil (>C24-C36)	0.502	0.414		mg/L		82	71 - 140	10	27
<b>Surrogate</b>									
<i>o-Terphenyl</i>	69								

## Method: 6020 - Metals (ICP/MS)

**Lab Sample ID: MB 580-201922/19-A**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 201922**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0050		mg/L		09/28/15 13:59	09/29/15 00:53	5
Barium	ND		0.0060		mg/L		09/28/15 13:59	09/29/15 00:53	5
Cadmium	ND		0.0020		mg/L		09/28/15 13:59	09/29/15 00:53	5
Chromium	ND		0.0020		mg/L		09/28/15 13:59	09/29/15 00:53	5
Copper	ND		0.010		mg/L		09/28/15 13:59	09/29/15 00:53	5
Lead	ND		0.0020		mg/L		09/28/15 13:59	09/29/15 00:53	5
Manganese	ND		0.010		mg/L		09/28/15 13:59	09/29/15 00:53	5
Selenium	ND		0.0050		mg/L		09/28/15 13:59	09/29/15 00:53	5
Silver	ND		0.0020		mg/L		09/28/15 13:59	09/29/15 00:53	5
Zinc	ND		0.035		mg/L		09/28/15 13:59	09/29/15 00:53	5

**Lab Sample ID: LCS 580-201922/20-A**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 201922**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Arsenic	4.00	4.09		mg/L		102	80 - 120
Barium	4.00	4.21		mg/L		105	80 - 120
Cadmium	0.100	0.105		mg/L		105	80 - 120
Chromium	0.400	0.390		mg/L		98	80 - 120
Copper	0.500	0.504		mg/L		101	80 - 120
Lead	1.00	0.938		mg/L		94	80 - 120
Manganese	1.00	1.01		mg/L		101	80 - 120
Selenium	4.00	4.24		mg/L		106	80 - 120
Silver	0.600	0.581		mg/L		97	80 - 120

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 GWM B0045452.0018.00420

TestAmerica Job ID: 580-53489-1

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: LCS 580-201922/20-A**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 201922**

**%Rec.**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Zinc	4.00	3.96		mg/L	99	80 - 120	

**Lab Sample ID: LCSD 580-201922/21-A**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 201922**

**%Rec.**

**RPD**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	4.00	4.03		mg/L	101	80 - 120		1	20
Barium	4.00	4.14		mg/L	104	80 - 120		2	20
Cadmium	0.100	0.103		mg/L	103	80 - 120		2	20
Chromium	0.400	0.397		mg/L	99	80 - 120		2	20
Copper	0.500	0.502		mg/L	100	80 - 120		1	20
Lead	1.00	0.926		mg/L	93	80 - 120		1	20
Manganese	1.00	1.00		mg/L	100	80 - 120		0	20
Selenium	4.00	4.11		mg/L	103	80 - 120		3	20
Silver	0.600	0.579		mg/L	96	80 - 120		0	20
Zinc	4.00	4.02		mg/L	101	80 - 120		1	20

**Lab Sample ID: 580-53396-D-2-C MS**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Matrix Spike**

**Prep Type: Total/NA**

**Prep Batch: 201922**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Arsenic	0.0093		4.00	4.36		mg/L	109	80 - 120	
Barium	0.056		4.00	4.47		mg/L	110	80 - 120	
Cadmium	ND		0.100	0.111		mg/L	111	80 - 120	
Chromium	ND		0.400	0.434		mg/L	108	80 - 120	
Copper	ND		0.500	0.540		mg/L	108	80 - 120	
Lead	ND		1.00	1.01		mg/L	101	80 - 120	
Manganese	3.6		1.00	4.73		mg/L	111	80 - 120	
Selenium	ND		4.00	4.54		mg/L	114	80 - 120	
Silver	ND		0.600	0.612		mg/L	102	80 - 120	
Zinc	ND		4.00	4.31		mg/L	107	80 - 120	

**Lab Sample ID: 580-53396-D-2-D MSD**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total/NA**

**Prep Batch: 201922**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	0.0093		4.00	4.28		mg/L	107	80 - 120		2	20
Barium	0.056		4.00	4.40		mg/L	109	80 - 120		2	20
Cadmium	ND		0.100	0.108		mg/L	108	80 - 120		3	20
Chromium	ND		0.400	0.426		mg/L	106	80 - 120		2	20
Copper	ND		0.500	0.529		mg/L	106	80 - 120		2	20
Lead	ND		1.00	0.996		mg/L	100	80 - 120		1	20
Manganese	3.6		1.00	4.71		mg/L	110	80 - 120		0	20
Selenium	ND		4.00	4.45		mg/L	111	80 - 120		2	20
Silver	ND		0.600	0.605		mg/L	101	80 - 120		1	20
Zinc	ND		4.00	4.23		mg/L	105	80 - 120		2	20

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 GWM B0045452.0018.00420

TestAmerica Job ID: 580-53489-1

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: 580-53396-D-2-B DU**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Duplicate**

**Prep Type: Total/NA**

**Prep Batch: 201922**

**RPD**

**Limit**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Arsenic	0.0093		0.00931		mg/L		0.2	20
Barium	0.056		0.0568		mg/L		1	20
Cadmium	ND		ND		mg/L		NC	20
Chromium	ND		ND		mg/L		NC	20
Copper	ND		ND		mg/L		NC	20
Lead	ND		ND		mg/L		NC	20
Manganese	3.6		3.65		mg/L		1	20
Selenium	ND		ND		mg/L		NC	20
Silver	ND		ND		mg/L		NC	20
Zinc	ND		ND		mg/L		NC	20

## Method: 7470A - Mercury (CVAA)

**Lab Sample ID: MB 580-202208/20-A**

**Matrix: Water**

**Analysis Batch: 202307**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 202208**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.00020		mg/L		10/01/15 09:51	10/01/15 17:06	1

**Lab Sample ID: LCS 580-202208/21-A**

**Matrix: Water**

**Analysis Batch: 202307**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 202208**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.
						Limits	Limits
Mercury	0.00200	0.00178		mg/L		89	80 - 120

**Lab Sample ID: LCSD 580-202208/22-A**

**Matrix: Water**

**Analysis Batch: 202307**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 202208**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.
						Limits	Limits
Mercury	0.00200	0.00177		mg/L		89	80 - 120

**Lab Sample ID: LCSSRM 580-202208/23-A**

**Matrix: Water**

**Analysis Batch: 202307**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 202208**

Analyte	Spike Added	LCSSRM Result	LCSSRM Qualifier	Unit	D	%Rec	%Rec.
						Limits	Limits
Mercury	0.00200	0.00182		mg/L		91	75 - 125

**Lab Sample ID: 580-53253-D-32-C MS**

**Matrix: Water**

**Analysis Batch: 202307**

**Client Sample ID: Matrix Spike**

**Prep Type: Total/NA**

**Prep Batch: 202208**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec.
								Limits	Limits
Mercury	ND		0.00200	0.00185		mg/L		92	80 - 120

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 GWM B0045452.0018.00420

TestAmerica Job ID: 580-53489-1

## Method: 7470A - Mercury (CVAA) (Continued)

**Lab Sample ID: 580-53253-D-32-D MSD**

**Matrix: Water**

**Analysis Batch: 202307**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total/NA**

**Prep Batch: 202208**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	RPD	RPD Limit
Mercury	ND		0.00200	0.00177		mg/L		88	80 - 120	5 20

**Lab Sample ID: 580-53253-D-32-B DU**

**Matrix: Water**

**Analysis Batch: 202307**

**Client Sample ID: Duplicate**

**Prep Type: Total/NA**

**Prep Batch: 202208**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Mercury	ND		ND		mg/L		NC	20

## Method: SM 4500 CN E - Cyanide, Total

**Lab Sample ID: MB 580-201655/1-A**

**Matrix: Water**

**Analysis Batch: 201673**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 201655**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	ND		0.060		mg/L		09/24/15 15:15	09/24/15 15:15	1

**Lab Sample ID: LCS 580-201655/2-A**

**Matrix: Water**

**Analysis Batch: 201673**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 201655**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	Limits
Cyanide, Total	0.500	0.474		mg/L		95	90 - 110

**Lab Sample ID: 580-53489-2 MS**

**Matrix: Water**

**Analysis Batch: 201673**

**Client Sample ID: EB-SP-CHEV-1**

**Prep Type: Total/NA**

**Prep Batch: 201655**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec.	Limits
Cyanide, Total	ND		0.500	0.480		mg/L		96	90 - 110

**Lab Sample ID: 580-53489-2 MSD**

**Matrix: Water**

**Analysis Batch: 201673**

**Client Sample ID: EB-SP-CHEV-1**

**Prep Type: Total/NA**

**Prep Batch: 201655**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	RPD	RPD Limit
Cyanide, Total	ND		0.500	0.487		mg/L		97	90 - 110	2 10

**Lab Sample ID: 580-53489-2 DU**

**Matrix: Water**

**Analysis Batch: 201673**

**Client Sample ID: EB-SP-CHEV-1**

**Prep Type: Total/NA**

**Prep Batch: 201655**

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Cyanide, Total	ND		ND		mg/L		NC	10

TestAmerica Seattle

# Lab Chronicle

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 GWM B0045452.0018.00420

TestAmerica Job ID: 580-53489-1

**Client Sample ID: Trip Blank**

**Date Collected: 09/21/15 00:00**

**Date Received: 09/21/15 15:00**

**Lab Sample ID: 580-53489-1**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	NWTPH-Gx		1	201867	09/28/15 16:10	D1R	TAL SEA

**Client Sample ID: EB-SP-CHEV-1**

**Date Collected: 09/21/15 12:30**

**Date Received: 09/21/15 15:00**

**Lab Sample ID: 580-53489-2**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	202326	10/02/15 16:59	TL1	TAL SEA
Total/NA	Prep	3520C			201840	09/26/15 14:45	JDR	TAL SEA
Total/NA	Analysis	8270C SIM		1	202697	10/07/15 22:05	ERZ	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	201867	09/28/15 21:08	D1R	TAL SEA
Total/NA	Prep	3510C			201788	09/25/15 16:18	DCC	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	201835	09/28/15 22:44	KW	TAL SEA
Total/NA	Prep	3010A			201922	09/28/15 13:59	PAB	TAL SEA
Total/NA	Analysis	6020		5	201970	09/29/15 02:20	FCW	TAL SEA
Total/NA	Prep	7470A			202208	10/01/15 09:51	MKN	TAL SEA
Total/NA	Analysis	7470A		1	202307	10/01/15 18:08	FCW	TAL SEA
Total/NA	Analysis	SM 4500 CN E		1	201673	09/24/15 15:15	JLS	TAL SEA
Total/NA	Prep	Distill/CN			201655	09/24/15 15:15	JLS	TAL SEA

**Laboratory References:**

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

TestAmerica Seattle

# Certification Summary

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 GWM B0045452.0018.00420

TestAmerica Job ID: 580-53489-1

## Laboratory: TestAmerica Seattle

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-022	03-02-16
California	State Program	9	2901	01-31-17
L-A-B	DoD ELAP		L2236	01-19-16
L-A-B	ISO/IEC 17025		L2236	01-19-16
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-06-16
US Fish & Wildlife	Federal		LE058448-0	02-28-16
USDA	Federal		P330-14-00126	04-08-17
Washington	State Program	10	C553	02-17-16

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TestAmerica Seattle

## Sample Summary

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 GWM B0045452.0018.00420

TestAmerica Job ID: 580-53489-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-53489-1	Trip Blank	Water	09/21/15 00:00	09/21/15 15:00
580-53489-2	EB-SP-CHEV-1	Water	09/21/15 12:30	09/21/15 15:00

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TestAmerica Seattle



580-53489 Chain of Custody

 Rush Short HoldChain of  
Custody Record

Client <b>ARCADIS</b>	Client Contact <b>Lunne Fenley</b>		Date <b>9/21/15</b>	Chain of Custody Number <b>30566</b>
Address <b>111 SW Columbia Street, Suite 670</b>	Telephone Number (Area Code)/Fax Number <b>503-220-8201 x114</b>		Lab Number	Page <b>1</b> of <b>1</b>
City <b>Portland</b>	State <b>OR</b>	Zip Code <b>97201</b>	Sampler <b>MA/HAD</b>	Lab Contact <b>Sarah Murphy</b>
Project Name and Location (State) <b>BQ15 Willbridge GWM</b>			Analysis (Attach list if more space is needed)	
Contract/Purchase Order/Quote No. <b>B004542.0018.00420</b>			Billing Contact	
Sample I.D. and Location/Description (Containers for each sample may be combined on one line)			Matrix	Containers & Preservatives
<b>trip blank</b> <b>EB-SP-CHEV-1</b>			Date <b>9/21/15</b> Time <b>1230</b> Alt <b>✓</b> Sample <b>Soil</b> Substr <b>Soil</b> Media <b>Water</b> Matrix <b>GTEX, MWG</b>	Container <b>Canister</b> Preservative <b>Acetone</b> Method <b>HTH (low)</b> Lab <b>HAD</b> Media <b>Water</b> Lab <b>HAD</b> Media <b>Water</b> Lab <b>HAD</b> Media <b>Water</b>
Special Instructions/ Conditions of Receipt				

Page 19 of 20

Cooler <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Cooler Temp: <b>ice</b>	Possible Hazard Identification <input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	(A fee may be assessed if samples are retained longer than 1 month)
Turn Around Time Required (business days)		QC Requirements (Specify)	
<input type="checkbox"/> 24 Hours <input type="checkbox"/> 48 Hours <input type="checkbox"/> 5 Days <input type="checkbox"/> 10 Days <input type="checkbox"/> 15 Days <input checked="" type="checkbox"/> Other <b>2 Weeks</b>		IR1 0.7/0.5   A2 1.3/1.4	
1. Relinquished By Sign/Print <b>Holly Olson</b>		Date <b>9/21/15</b>	Time <b>1430</b>
2. Relinquished By Sign/Print <b>Jessica Morgan</b>		Date <b>9/21/15</b>	Time <b>1500</b>
3. Relinquished By Sign/Print <b>Tom Blank</b>		Date <b>9/21/15</b>	Time <b>1400</b>
Comments: * including KCE4.8, 2n, C*   ** including 2-methylnaphthalene send report to <a href="mailto:Brian.marcum@arcadis.com">Brian.marcum@arcadis.com</a> and <a href="mailto:Brian.Flemiskra@arcadis.com">Brian.Flemiskra@arcadis.com</a>			
DISTRIBUTION: WHITE - Stays with the Samples; CANARY - Returned to Client with Report; PINK - Field Copy			

TAL-8274-580 (0210)

11 10 9 8 7 6 5 4 3 2 1

## Login Sample Receipt Checklist

Client: ARCADIS U.S. Inc

Job Number: 580-53489-1

**Login Number:** 53489

**List Source:** TestAmerica Seattle

**List Number:** 1

**Creator:** Gonzales, Steve

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

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# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING



## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Seattle  
5755 8th Street East  
Tacoma, WA 98424  
Tel: (253)922-2310

TestAmerica Job ID: 580-53364-1  
TestAmerica Sample Delivery Group: 354972  
Client Project/Site: 3Q2015 Willbridge GWM  
B0046601.0012.0042

For:

ARCADIS U.S. Inc  
111 SW Columbia Street  
Suite 670  
Portland, Oregon 97201

Attn: Brian Marcum

Sarah Murphy

Authorized for release by:

11/5/2015 4:58:22 PM

Sarah Murphy, Project Manager I  
(253)922-2310  
[sarah.murphy@testamericainc.com](mailto:sarah.murphy@testamericainc.com)

### LINKS

Review your project  
results through

Total Access

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Ask  
The  
Expert

Visit us at:

[www.testamericainc.com](http://www.testamericainc.com)

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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# Case Narrative

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53364-1

SDG: 354972

## Job ID: 580-53364-1

### Laboratory: TestAmerica Seattle

#### Narrative

#### Job Narrative 580-53364-1

#### Receipt

The samples were received on 9/16/2015 12:50 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 5 coolers at receipt time were 0.5° C, 1.0° C, 1.8° C, 2.9° C and 4.3° C.

#### GC/MS VOA

Method(s) 8260B: The following volatile samples were analyzed with significant headspace in the sample vial: U-24B-Cutoff-Phillips (580-53364-8) and U-24A-Cutoff-Phillips (580-53364-9). Significant headspace is defined as a bubble greater than 6 mm in diameter.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### GC/MS Semi VOA

Method(s) 8270C SIM: The following sample was diluted to bring the concentration of target analytes within the calibration range: U-24A-Cutoff-Phillips (580-53364-9) at 10.0. Elevated reporting limits (RLs) are provided.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### GC Semi VOA

Method(s) NWTPH-Dx: The following samples required a dilution due to the nature of the sample matrix: U-22B-Cutoff-Phillips (580-53364-2), U-22A-Cutoff-Phillips (580-53364-4), U-23-Cutoff-Phillips (580-53364-5), U-26-Cutoff-Phillips (580-53364-6), U-25-Cutoff-Phillips (580-53364-7) and U-24A-Cutoff-Phillips (580-53364-9). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Definitions/Glossary

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53364-1

SDG: 354972

## Qualifiers

### Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.

## Glossary

### Abbreviation **These commonly used abbreviations may or may not be present in this report.**

□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53364-1

SDG: 354972

## Client Sample ID: Trip Blanks

Date Collected: 09/15/15 00:00

Date Received: 09/16/15 12:50

## Lab Sample ID: 580-53364-1

Matrix: Water

### Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			09/29/15 14:34	1
Ethylbenzene	ND		3.0		ug/L			09/29/15 14:34	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/29/15 14:34	1
m-Xylene & p-Xylene	ND		3.0		ug/L			09/29/15 14:34	1
o-Xylene	ND		2.0		ug/L			09/29/15 14:34	1
Toluene	ND		2.0		ug/L			09/29/15 14:34	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	111			75 - 120				09/29/15 14:34	1
Dibromofluoromethane (Surr)	105			85 - 115				09/29/15 14:34	1
1,2-Dichloroethane-d4 (Surr)	115			70 - 120				09/29/15 14:34	1
Toluene-d8 (Surr)	96			85 - 120				09/29/15 14:34	1
Trifluorotoluene (Surr)	108			70 - 136				09/29/15 14:34	1

### Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050		mg/L			09/24/15 18:19	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	97			50 - 150				09/24/15 18:19	1
Trifluorotoluene (Surr)	108			50 - 150				09/24/15 18:19	1

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53364-1

SDG: 354972

**Client Sample ID: U-22B-Cutoff-Phillips**

**Lab Sample ID: 580-53364-2**

**Matrix: Water**

Date Collected: 09/15/15 13:00

Date Received: 09/16/15 12:50

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			09/29/15 15:28	1
Ethylbenzene	ND		3.0		ug/L			09/29/15 15:28	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/29/15 15:28	1
m-Xylene & p-Xylene	ND		3.0		ug/L			09/29/15 15:28	1
o-Xylene	ND		2.0		ug/L			09/29/15 15:28	1
Toluene	ND		2.0		ug/L			09/29/15 15:28	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	109			75 - 120				09/29/15 15:28	1
Dibromofluoromethane (Surr)	104			85 - 115				09/29/15 15:28	1
1,2-Dichloroethane-d4 (Surr)	110			70 - 120				09/29/15 15:28	1
Toluene-d8 (Surr)	99			85 - 120				09/29/15 15:28	1
Trifluorotoluene (Surr)	102			70 - 136				09/29/15 15:28	1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	<b>0.027</b>			0.0095	ug/L		09/19/15 14:58	10/03/15 23:32	1
2-Methylnaphthalene	ND		0.012		ug/L		09/19/15 14:58	10/03/15 23:32	1
1-Methylnaphthalene	ND		0.0095		ug/L		09/19/15 14:58	10/03/15 23:32	1
Acenaphthylene	ND		0.0095		ug/L		09/19/15 14:58	10/03/15 23:32	1
<b>Acenaphthene</b>	<b>0.012</b>			0.0095	ug/L		09/19/15 14:58	10/03/15 23:32	1
<b>Fluorene</b>	<b>0.022</b>			0.0095	ug/L		09/19/15 14:58	10/03/15 23:32	1
Phenanthrene	ND		0.095		ug/L		09/19/15 14:58	10/03/15 23:32	1
Anthracene	ND		0.024		ug/L		09/19/15 14:58	10/03/15 23:32	1
Fluoranthene	ND		0.047		ug/L		09/19/15 14:58	10/03/15 23:32	1
Pyrene	ND		0.047		ug/L		09/19/15 14:58	10/03/15 23:32	1
Benzo[a]anthracene	ND		0.0095		ug/L		09/19/15 14:58	10/03/15 23:32	1
Chrysene	ND		0.0095		ug/L		09/19/15 14:58	10/03/15 23:32	1
Benzo[a]pyrene	ND		0.0095		ug/L		09/19/15 14:58	10/03/15 23:32	1
Indeno[1,2,3-cd]pyrene	ND		0.0095		ug/L		09/19/15 14:58	10/03/15 23:32	1
Dibenz(a,h)anthracene	ND		0.0095		ug/L		09/19/15 14:58	10/03/15 23:32	1
Benzo[g,h,i]perylene	ND		0.0095		ug/L		09/19/15 14:58	10/03/15 23:32	1
Benzo[b]fluoranthene	ND		0.0095		ug/L		09/19/15 14:58	10/03/15 23:32	1
Benzo[k]fluoranthene	ND		0.0095		ug/L		09/19/15 14:58	10/03/15 23:32	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Terphenyl-d14	87			64 - 150				09/19/15 14:58	10/03/15 23:32

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050		mg/L			09/25/15 20:51	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	92			50 - 150				09/25/15 20:51	1
Trifluorotoluene (Surr)	106			50 - 150				09/25/15 20:51	1

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	<b>0.57</b>		0.54		mg/L		09/23/15 12:56	09/28/15 16:24	5
Motor Oil (>C24-C36)	ND		1.2		mg/L		09/23/15 12:56	09/28/15 16:24	5

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53364-1

SDG: 354972

**Client Sample ID: U-22B-Cutoff-Phillips**

Date Collected: 09/15/15 13:00

Date Received: 09/16/15 12:50

**Lab Sample ID: 580-53364-2**

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o-Terphenyl</i>	93		50 - 150	09/23/15 12:56	09/28/15 16:24	5

**Method: 1631E - Mercury, Low Level (CVAFS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.50		ng/L	D	09/23/15 16:34	09/25/15 11:41	1

**Method: 6020 - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0050		mg/L	D	09/28/15 13:00	09/28/15 23:08	5
<b>Barium</b>	<b>0.054</b>		0.0060		mg/L	D	09/28/15 13:00	09/28/15 23:08	5
Cadmium	ND		0.0020		mg/L	D	09/28/15 13:00	09/28/15 23:08	5
Chromium	ND		0.0020		mg/L	D	09/28/15 13:00	09/28/15 23:08	5
Copper	ND		0.010		mg/L	D	09/28/15 13:00	09/28/15 23:08	5
Lead	ND		0.0020		mg/L	D	09/28/15 13:00	09/28/15 23:08	5
<b>Manganese</b>	<b>1.4</b>		0.010		mg/L	D	09/28/15 13:00	09/28/15 23:08	5
Selenium	ND		0.0050		mg/L	D	09/28/15 13:00	09/28/15 23:08	5
Silver	ND		0.0020		mg/L	D	09/28/15 13:00	09/28/15 23:08	5
Zinc	ND		0.035		mg/L	D	09/28/15 13:00	09/28/15 23:08	5

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53364-1

SDG: 354972

**Client Sample ID: BD-Cutoff-Phillips-1**

**Lab Sample ID: 580-53364-3**

**Matrix: Water**

Date Collected: 09/15/15 00:00

Date Received: 09/16/15 12:50

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			09/29/15 15:54	1
Ethylbenzene	ND		3.0		ug/L			09/29/15 15:54	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/29/15 15:54	1
m-Xylene & p-Xylene	ND		3.0		ug/L			09/29/15 15:54	1
o-Xylene	ND		2.0		ug/L			09/29/15 15:54	1
Toluene	ND		2.0		ug/L			09/29/15 15:54	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	107			75 - 120				09/29/15 15:54	1
Dibromofluoromethane (Surr)	105			85 - 115				09/29/15 15:54	1
1,2-Dichloroethane-d4 (Surr)	112			70 - 120				09/29/15 15:54	1
Toluene-d8 (Surr)	97			85 - 120				09/29/15 15:54	1
Trifluorotoluene (Surr)	97			70 - 136				09/29/15 15:54	1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	<b>0.024</b>			0.0098	ug/L		09/19/15 14:58	10/03/15 23:55	1
2-Methylnaphthalene	ND		0.013		ug/L		09/19/15 14:58	10/03/15 23:55	1
1-Methylnaphthalene	ND		0.0098		ug/L		09/19/15 14:58	10/03/15 23:55	1
Acenaphthylene	ND		0.0098		ug/L		09/19/15 14:58	10/03/15 23:55	1
<b>Acenaphthene</b>	<b>0.012</b>			0.0098	ug/L		09/19/15 14:58	10/03/15 23:55	1
<b>Fluorene</b>	<b>0.014</b>			0.0098	ug/L		09/19/15 14:58	10/03/15 23:55	1
Phenanthrene	ND		0.098		ug/L		09/19/15 14:58	10/03/15 23:55	1
Anthracene	ND		0.025		ug/L		09/19/15 14:58	10/03/15 23:55	1
Fluoranthene	ND		0.049		ug/L		09/19/15 14:58	10/03/15 23:55	1
Pyrene	ND		0.049		ug/L		09/19/15 14:58	10/03/15 23:55	1
Benzo[a]anthracene	ND		0.0098		ug/L		09/19/15 14:58	10/03/15 23:55	1
Chrysene	ND		0.0098		ug/L		09/19/15 14:58	10/03/15 23:55	1
Benzo[a]pyrene	ND		0.0098		ug/L		09/19/15 14:58	10/03/15 23:55	1
Indeno[1,2,3-cd]pyrene	ND		0.0098		ug/L		09/19/15 14:58	10/03/15 23:55	1
Dibenz(a,h)anthracene	ND		0.0098		ug/L		09/19/15 14:58	10/03/15 23:55	1
Benzo[g,h,i]perylene	ND		0.0098		ug/L		09/19/15 14:58	10/03/15 23:55	1
Benzo[b]fluoranthene	ND		0.0098		ug/L		09/19/15 14:58	10/03/15 23:55	1
Benzo[k]fluoranthene	ND		0.0098		ug/L		09/19/15 14:58	10/03/15 23:55	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Terphenyl-d14	92			64 - 150				09/19/15 14:58	10/03/15 23:55

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050		mg/L			09/25/15 21:24	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	93			50 - 150				09/25/15 21:24	1
Trifluorotoluene (Surr)	104			50 - 150				09/25/15 21:24	1

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.57		mg/L		09/23/15 12:56	09/28/15 16:43	5
Motor Oil (>C24-C36)	ND		1.3		mg/L		09/23/15 12:56	09/28/15 16:43	5

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53364-1

SDG: 354972

**Client Sample ID: BD-Cutoff-Phillips-1**

**Lab Sample ID: 580-53364-3**

Matrix: Water

Date Collected: 09/15/15 00:00

Date Received: 09/16/15 12:50

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o-Terphenyl</i>	87		50 - 150	09/23/15 12:56	09/28/15 16:43	5

**Method: 1631E - Mercury, Low Level (CVAFS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.50		ng/L	D	09/23/15 16:34	09/25/15 11:45	1

**Method: 6020 - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0050		mg/L	D	09/28/15 13:00	09/28/15 23:12	5
<b>Barium</b>	<b>0.051</b>		0.0060		mg/L	D	09/28/15 13:00	09/28/15 23:12	5
Cadmium	ND		0.0020		mg/L	D	09/28/15 13:00	09/28/15 23:12	5
<b>Chromium</b>	<b>0.0022</b>		0.0020		mg/L	D	09/28/15 13:00	09/28/15 23:12	5
Copper	ND		0.010		mg/L	D	09/28/15 13:00	09/28/15 23:12	5
Lead	ND		0.0020		mg/L	D	09/28/15 13:00	09/28/15 23:12	5
<b>Manganese</b>	<b>1.3</b>		0.010		mg/L	D	09/28/15 13:00	09/28/15 23:12	5
Selenium	ND		0.0050		mg/L	D	09/28/15 13:00	09/28/15 23:12	5
Silver	ND		0.0020		mg/L	D	09/28/15 13:00	09/28/15 23:12	5
Zinc	ND		0.035		mg/L	D	09/28/15 13:00	09/28/15 23:12	5

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53364-1

SDG: 354972

**Client Sample ID: U-22A-Cutoff-Phillips**

**Lab Sample ID: 580-53364-4**

**Matrix: Water**

Date Collected: 09/15/15 12:30

Date Received: 09/16/15 12:50

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			09/29/15 16:21	1
Ethylbenzene	ND		3.0		ug/L			09/29/15 16:21	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/29/15 16:21	1
m-Xylene & p-Xylene	ND		3.0		ug/L			09/29/15 16:21	1
o-Xylene	ND		2.0		ug/L			09/29/15 16:21	1
Toluene	ND		2.0		ug/L			09/29/15 16:21	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	109			75 - 120				09/29/15 16:21	1
Dibromofluoromethane (Surr)	108			85 - 115				09/29/15 16:21	1
1,2-Dichloroethane-d4 (Surr)	115			70 - 120				09/29/15 16:21	1
Toluene-d8 (Surr)	97			85 - 120				09/29/15 16:21	1
Trifluorotoluene (Surr)	97			70 - 136				09/29/15 16:21	1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	0.027		0.011		ug/L		09/19/15 14:58	10/04/15 00:18	1
2-Methylnaphthalene	ND		0.015		ug/L		09/19/15 14:58	10/04/15 00:18	1
1-Methylnaphthalene	ND		0.011		ug/L		09/19/15 14:58	10/04/15 00:18	1
Acenaphthylene	ND		0.011		ug/L		09/19/15 14:58	10/04/15 00:18	1
Acenaphthene	0.052		0.011		ug/L		09/19/15 14:58	10/04/15 00:18	1
Fluorene	0.19		0.011		ug/L		09/19/15 14:58	10/04/15 00:18	1
Phenanthrene	0.15		0.11		ug/L		09/19/15 14:58	10/04/15 00:18	1
Anthracene	ND		0.028		ug/L		09/19/15 14:58	10/04/15 00:18	1
Fluoranthene	ND		0.056		ug/L		09/19/15 14:58	10/04/15 00:18	1
Pyrene	ND		0.056		ug/L		09/19/15 14:58	10/04/15 00:18	1
Benzo[a]anthracene	ND		0.011		ug/L		09/19/15 14:58	10/04/15 00:18	1
Chrysene	ND		0.011		ug/L		09/19/15 14:58	10/04/15 00:18	1
Benzo[a]pyrene	ND		0.011		ug/L		09/19/15 14:58	10/04/15 00:18	1
Indeno[1,2,3-cd]pyrene	ND		0.011		ug/L		09/19/15 14:58	10/04/15 00:18	1
Dibenz(a,h)anthracene	ND		0.011		ug/L		09/19/15 14:58	10/04/15 00:18	1
Benzo[g,h,i]perylene	ND		0.011		ug/L		09/19/15 14:58	10/04/15 00:18	1
Benzo[b]fluoranthene	ND		0.011		ug/L		09/19/15 14:58	10/04/15 00:18	1
Benzo[k]fluoranthene	ND		0.011		ug/L		09/19/15 14:58	10/04/15 00:18	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Terphenyl-d14	87			64 - 150				09/19/15 14:58	10/04/15 00:18

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	0.078		0.050		mg/L			09/25/15 21:57	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	92			50 - 150				09/25/15 21:57	1
Trifluorotoluene (Surr)	105			50 - 150				09/25/15 21:57	1

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.71		0.56		mg/L		09/23/15 12:56	09/28/15 17:01	5
Motor Oil (>C24-C36)	ND		1.3		mg/L		09/23/15 12:56	09/28/15 17:01	5

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53364-1

SDG: 354972

**Client Sample ID: U-22A-Cutoff-Phillips**

Date Collected: 09/15/15 12:30

Date Received: 09/16/15 12:50

**Lab Sample ID: 580-53364-4**

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o-Terphenyl</i>	92		50 - 150	09/23/15 12:56	09/28/15 17:01	5

**Method: 1631E - Mercury, Low Level (CVAFS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Mercury</b>	<b>2.2</b>		0.50		ng/L	D	09/23/15 16:34	09/25/15 11:48	1

**Method: 6020 - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0050		mg/L	D	09/28/15 13:00	09/28/15 23:17	5
<b>Barium</b>	<b>0.13</b>		0.0060		mg/L	D	09/28/15 13:00	09/28/15 23:17	5
Cadmium	ND		0.0020		mg/L	D	09/28/15 13:00	09/28/15 23:17	5
<b>Chromium</b>	<b>0.0032</b>		0.0020		mg/L	D	09/28/15 13:00	09/28/15 23:17	5
Copper	ND		0.010		mg/L	D	09/28/15 13:00	09/28/15 23:17	5
<b>Lead</b>	<b>0.0026</b>		0.0020		mg/L	D	09/28/15 13:00	09/28/15 23:17	5
<b>Manganese</b>	<b>2.3</b>		0.010		mg/L	D	09/28/15 13:00	09/28/15 23:17	5
Selenium	ND		0.0050		mg/L	D	09/28/15 13:00	09/28/15 23:17	5
Silver	ND		0.0020		mg/L	D	09/28/15 13:00	09/28/15 23:17	5
Zinc	ND		0.035		mg/L	D	09/28/15 13:00	09/28/15 23:17	5

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53364-1

SDG: 354972

**Client Sample ID: U-23-Cutoff-Phillips**

**Lab Sample ID: 580-53364-5**

**Matrix: Water**

Date Collected: 09/15/15 14:00

Date Received: 09/16/15 12:50

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			09/29/15 16:48	1
Ethylbenzene	ND		3.0		ug/L			09/29/15 16:48	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/29/15 16:48	1
m-Xylene & p-Xylene	ND		3.0		ug/L			09/29/15 16:48	1
o-Xylene	ND		2.0		ug/L			09/29/15 16:48	1
Toluene	ND		2.0		ug/L			09/29/15 16:48	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	108			75 - 120				09/29/15 16:48	1
Dibromofluoromethane (Surr)	106			85 - 115				09/29/15 16:48	1
1,2-Dichloroethane-d4 (Surr)	111			70 - 120				09/29/15 16:48	1
Toluene-d8 (Surr)	99			85 - 120				09/29/15 16:48	1
Trifluorotoluene (Surr)	98			70 - 136				09/29/15 16:48	1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	0.052		0.010		ug/L		09/19/15 14:58	10/04/15 00:41	1
2-Methylnaphthalene	0.019		0.013		ug/L		09/19/15 14:58	10/04/15 00:41	1
1-Methylnaphthalene	0.036		0.010		ug/L		09/19/15 14:58	10/04/15 00:41	1
Acenaphthylene	0.011		0.010		ug/L		09/19/15 14:58	10/04/15 00:41	1
Acenaphthene	0.057		0.010		ug/L		09/19/15 14:58	10/04/15 00:41	1
Fluorene	0.22		0.010		ug/L		09/19/15 14:58	10/04/15 00:41	1
Phenanthrene	ND		0.10		ug/L		09/19/15 14:58	10/04/15 00:41	1
Anthracene	0.032		0.025		ug/L		09/19/15 14:58	10/04/15 00:41	1
Fluoranthene	ND		0.050		ug/L		09/19/15 14:58	10/04/15 00:41	1
Pyrene	ND		0.050		ug/L		09/19/15 14:58	10/04/15 00:41	1
Benzo[a]anthracene	ND		0.010		ug/L		09/19/15 14:58	10/04/15 00:41	1
Chrysene	ND		0.010		ug/L		09/19/15 14:58	10/04/15 00:41	1
Benzo[a]pyrene	ND		0.010		ug/L		09/19/15 14:58	10/04/15 00:41	1
Indeno[1,2,3-cd]pyrene	ND		0.010		ug/L		09/19/15 14:58	10/04/15 00:41	1
Dibenz(a,h)anthracene	ND		0.010		ug/L		09/19/15 14:58	10/04/15 00:41	1
Benzo[g,h,i]perylene	ND		0.010		ug/L		09/19/15 14:58	10/04/15 00:41	1
Benzo[b]fluoranthene	ND		0.010		ug/L		09/19/15 14:58	10/04/15 00:41	1
Benzo[k]fluoranthene	ND		0.010		ug/L		09/19/15 14:58	10/04/15 00:41	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Terphenyl-d14	93			64 - 150				09/19/15 14:58	10/04/15 00:41

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050		mg/L			09/25/15 22:30	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	92			50 - 150				09/25/15 22:30	1
Trifluorotoluene (Surr)	106			50 - 150				09/25/15 22:30	1

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	3.6		1.0		mg/L		09/23/15 12:56	09/28/15 17:19	10
Motor Oil (>C24-C36)	2.4		2.4		mg/L		09/23/15 12:56	09/28/15 17:19	10

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53364-1

SDG: 354972

**Client Sample ID: U-23-Cutoff-Phillips**

Date Collected: 09/15/15 14:00

Date Received: 09/16/15 12:50

**Lab Sample ID: 580-53364-5**

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o-Terphenyl</i>	80		50 - 150	09/23/15 12:56	09/28/15 17:19	10

**Method: 1631E - Mercury, Low Level (CVAFS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	12		0.50	ng/L		D	09/23/15 16:34	09/25/15 11:52	1

**Method: 6020 - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.019		0.0050	mg/L		D	09/28/15 13:00	09/28/15 23:22	5
Barium	0.27		0.0060	mg/L		D	09/28/15 13:00	09/28/15 23:22	5
Cadmium	ND		0.0020	mg/L		D	09/28/15 13:00	09/28/15 23:22	5
Chromium	0.035		0.0020	mg/L		D	09/28/15 13:00	09/28/15 23:22	5
Copper	0.071		0.010	mg/L		D	09/28/15 13:00	09/28/15 23:22	5
Lead	0.015		0.0020	mg/L		D	09/28/15 13:00	09/28/15 23:22	5
Manganese	3.2		0.010	mg/L		D	09/28/15 13:00	09/28/15 23:22	5
Selenium	ND		0.0050	mg/L		D	09/28/15 13:00	09/28/15 23:22	5
Silver	ND		0.0020	mg/L		D	09/28/15 13:00	09/28/15 23:22	5
Zinc	0.16		0.035	mg/L		D	09/28/15 13:00	09/28/15 23:22	5

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53364-1

SDG: 354972

**Client Sample ID: U-26-Cutoff-Phillips**

**Lab Sample ID: 580-53364-6**

**Matrix: Water**

Date Collected: 09/16/15 10:00

Date Received: 09/16/15 12:50

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			09/30/15 14:33	1
Ethylbenzene	ND		3.0		ug/L			09/30/15 14:33	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/30/15 14:33	1
m-Xylene & p-Xylene	ND		3.0		ug/L			09/30/15 14:33	1
o-Xylene	ND		2.0		ug/L			09/30/15 14:33	1
Toluene	ND		2.0		ug/L			09/30/15 14:33	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	103			75 - 120				09/30/15 14:33	1
Dibromofluoromethane (Surr)	99			85 - 115				09/30/15 14:33	1
1,2-Dichloroethane-d4 (Surr)	102			70 - 120				09/30/15 14:33	1
Toluene-d8 (Surr)	104			85 - 120				09/30/15 14:33	1
Trifluorotoluene (Surr)	101			70 - 136				09/30/15 14:33	1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Naphthalene</b>	<b>0.025</b>		0.0096		ug/L		09/19/15 14:58	10/04/15 01:04	1
2-Methylnaphthalene	ND		0.013		ug/L		09/19/15 14:58	10/04/15 01:04	1
<b>1-Methylnaphthalene</b>	<b>0.011</b>		0.0096		ug/L		09/19/15 14:58	10/04/15 01:04	1
Acenaphthylene	ND		0.0096		ug/L		09/19/15 14:58	10/04/15 01:04	1
Acenaphthene	ND		0.0096		ug/L		09/19/15 14:58	10/04/15 01:04	1
Fluorene	ND		0.0096		ug/L		09/19/15 14:58	10/04/15 01:04	1
Phenanthrene	ND		0.096		ug/L		09/19/15 14:58	10/04/15 01:04	1
Anthracene	ND		0.024		ug/L		09/19/15 14:58	10/04/15 01:04	1
Fluoranthene	ND		0.048		ug/L		09/19/15 14:58	10/04/15 01:04	1
Pyrene	ND		0.048		ug/L		09/19/15 14:58	10/04/15 01:04	1
Benzo[a]anthracene	ND		0.0096		ug/L		09/19/15 14:58	10/04/15 01:04	1
Chrysene	ND		0.0096		ug/L		09/19/15 14:58	10/04/15 01:04	1
Benzo[a]pyrene	ND		0.0096		ug/L		09/19/15 14:58	10/04/15 01:04	1
Indeno[1,2,3-cd]pyrene	ND		0.0096		ug/L		09/19/15 14:58	10/04/15 01:04	1
Dibenz(a,h)anthracene	ND		0.0096		ug/L		09/19/15 14:58	10/04/15 01:04	1
Benzo[g,h,i]perylene	ND		0.0096		ug/L		09/19/15 14:58	10/04/15 01:04	1
Benzo[b]fluoranthene	ND		0.0096		ug/L		09/19/15 14:58	10/04/15 01:04	1
Benzo[k]fluoranthene	ND		0.0096		ug/L		09/19/15 14:58	10/04/15 01:04	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Terphenyl-d14	91			64 - 150				09/19/15 14:58	10/04/15 01:04

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050		mg/L			09/25/15 23:03	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	93			50 - 150				09/25/15 23:03	1
Trifluorotoluene (Surr)	104			50 - 150				09/25/15 23:03	1

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	1.0		0.59		mg/L		09/23/15 12:56	09/28/15 17:37	5
Motor Oil (>C24-C36)	ND		1.3		mg/L		09/23/15 12:56	09/28/15 17:37	5

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53364-1

SDG: 354972

**Client Sample ID: U-26-Cutoff-Phillips**

Date Collected: 09/16/15 10:00

Date Received: 09/16/15 12:50

**Lab Sample ID: 580-53364-6**

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o-Terphenyl</i>	94		50 - 150	09/23/15 12:56	09/28/15 17:37	5

**Method: 1631E - Mercury, Low Level (CVAFS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	2.1		0.50		ng/L	D	09/23/15 16:34	09/25/15 11:56	1

**Method: 6020 - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.053		0.0050		mg/L	D	09/28/15 13:00	09/28/15 23:26	5
Barium	0.070		0.0060		mg/L	D	09/28/15 13:00	09/28/15 23:26	5
Cadmium	ND		0.0020		mg/L	D	09/28/15 13:00	09/28/15 23:26	5
Chromium	0.0040		0.0020		mg/L	D	09/28/15 13:00	09/28/15 23:26	5
Copper	ND		0.010		mg/L	D	09/28/15 13:00	09/28/15 23:26	5
Lead	0.0069		0.0020		mg/L	D	09/28/15 13:00	09/28/15 23:26	5
Manganese	6.7		0.010		mg/L	D	09/28/15 13:00	09/28/15 23:26	5
Selenium	0.029		0.0050		mg/L	D	09/28/15 13:00	09/28/15 23:26	5
Silver	0.0039		0.0020		mg/L	D	09/28/15 13:00	09/28/15 23:26	5
Zinc	0.035		0.035		mg/L	D	09/28/15 13:00	09/28/15 23:26	5

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53364-1

SDG: 354972

**Client Sample ID: U-25-Cutoff-Phillips**

**Lab Sample ID: 580-53364-7**

**Matrix: Water**

Date Collected: 09/16/15 09:30

Date Received: 09/16/15 12:50

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			09/30/15 15:00	1
Ethylbenzene	ND		3.0		ug/L			09/30/15 15:00	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/30/15 15:00	1
m-Xylene & p-Xylene	ND		3.0		ug/L			09/30/15 15:00	1
o-Xylene	ND		2.0		ug/L			09/30/15 15:00	1
Toluene	ND		2.0		ug/L			09/30/15 15:00	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	108			75 - 120				09/30/15 15:00	1
Dibromofluoromethane (Surr)	104			85 - 115				09/30/15 15:00	1
1,2-Dichloroethane-d4 (Surr)	106			70 - 120				09/30/15 15:00	1
Toluene-d8 (Surr)	103			85 - 120				09/30/15 15:00	1
Trifluorotoluene (Surr)	101			70 - 136				09/30/15 15:00	1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Naphthalene</b>	<b>0.016</b>		0.0098		ug/L		09/19/15 14:58	10/04/15 01:27	1
2-Methylnaphthalene	ND		0.013		ug/L		09/19/15 14:58	10/04/15 01:27	1
1-Methylnaphthalene	ND		0.0098		ug/L		09/19/15 14:58	10/04/15 01:27	1
Acenaphthylene	ND		0.0098		ug/L		09/19/15 14:58	10/04/15 01:27	1
Acenaphthene	ND		0.0098		ug/L		09/19/15 14:58	10/04/15 01:27	1
Fluorene	ND		0.0098		ug/L		09/19/15 14:58	10/04/15 01:27	1
Phenanthrene	ND		0.098		ug/L		09/19/15 14:58	10/04/15 01:27	1
Anthracene	ND		0.024		ug/L		09/19/15 14:58	10/04/15 01:27	1
<b>Fluoranthene</b>	<b>0.050</b>		0.049		ug/L		09/19/15 14:58	10/04/15 01:27	1
Pyrene	ND		0.049		ug/L		09/19/15 14:58	10/04/15 01:27	1
Benzo[a]anthracene	ND		0.0098		ug/L		09/19/15 14:58	10/04/15 01:27	1
Chrysene	ND		0.0098		ug/L		09/19/15 14:58	10/04/15 01:27	1
Benzo[a]pyrene	ND		0.0098		ug/L		09/19/15 14:58	10/04/15 01:27	1
Indeno[1,2,3-cd]pyrene	ND		0.0098		ug/L		09/19/15 14:58	10/04/15 01:27	1
Dibenz(a,h)anthracene	ND		0.0098		ug/L		09/19/15 14:58	10/04/15 01:27	1
Benzo[g,h,i]perylene	ND		0.0098		ug/L		09/19/15 14:58	10/04/15 01:27	1
<b>Benzo[b]fluoranthene</b>	<b>0.0098</b>		0.0098		ug/L		09/19/15 14:58	10/04/15 01:27	1
Benzo[k]fluoranthene	ND		0.0098		ug/L		09/19/15 14:58	10/04/15 01:27	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Terphenyl-d14	81			64 - 150				09/19/15 14:58	10/04/15 01:27

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050		mg/L			09/25/15 23:36	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	91			50 - 150				09/25/15 23:36	1
Trifluorotoluene (Surr)	104			50 - 150				09/25/15 23:36	1

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.60		0.57		mg/L		09/23/15 12:56	09/28/15 17:55	5
Motor Oil (>C24-C36)	ND		1.3		mg/L		09/23/15 12:56	09/28/15 17:55	5

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53364-1

SDG: 354972

**Client Sample ID: U-25-Cutoff-Phillips**

Date Collected: 09/16/15 09:30

Date Received: 09/16/15 12:50

**Lab Sample ID: 580-53364-7**

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o-Terphenyl</i>	90		50 - 150	09/23/15 12:56	09/28/15 17:55	5

**Method: 1631E - Mercury, Low Level (CVAFS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	8.0		0.50		ng/L	D	09/23/15 16:34	09/25/15 11:59	1

**Method: 6020 - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0050		mg/L	D	09/28/15 13:00	09/28/15 23:31	5
Barium	0.049		0.0060		mg/L	D	09/28/15 13:00	09/28/15 23:31	5
Cadmium	ND		0.0020		mg/L	D	09/28/15 13:00	09/28/15 23:31	5
Chromium	0.0038		0.0020		mg/L	D	09/28/15 13:00	09/28/15 23:31	5
Copper	ND		0.010		mg/L	D	09/28/15 13:00	09/28/15 23:31	5
Lead	0.0026		0.0020		mg/L	D	09/28/15 13:00	09/28/15 23:31	5
Manganese	1.4		0.010		mg/L	D	09/28/15 13:00	09/28/15 23:31	5
Selenium	ND		0.0050		mg/L	D	09/28/15 13:00	09/28/15 23:31	5
Silver	ND		0.0020		mg/L	D	09/28/15 13:00	09/28/15 23:31	5
Zinc	ND		0.035		mg/L	D	09/28/15 13:00	09/28/15 23:31	5

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53364-1

SDG: 354972

**Client Sample ID: U-24B-Cutoff-Phillips**

**Lab Sample ID: 580-53364-8**

**Matrix: Water**

Date Collected: 09/16/15 08:45

Date Received: 09/16/15 12:50

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			09/30/15 15:28	1
Ethylbenzene	ND		3.0		ug/L			09/30/15 15:28	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/30/15 15:28	1
m-Xylene & p-Xylene	ND		3.0		ug/L			09/30/15 15:28	1
o-Xylene	ND		2.0		ug/L			09/30/15 15:28	1
Toluene	ND		2.0		ug/L			09/30/15 15:28	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	103			75 - 120				09/30/15 15:28	1
Dibromofluoromethane (Surr)	99			85 - 115				09/30/15 15:28	1
1,2-Dichloroethane-d4 (Surr)	105			70 - 120				09/30/15 15:28	1
Toluene-d8 (Surr)	103			85 - 120				09/30/15 15:28	1
Trifluorotoluene (Surr)	102			70 - 136				09/30/15 15:28	1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	0.021		0.012		ug/L		09/19/15 14:58	10/04/15 01:50	1
2-Methylnaphthalene	ND		0.016		ug/L		09/19/15 14:58	10/04/15 01:50	1
1-Methylnaphthalene	ND		0.012		ug/L		09/19/15 14:58	10/04/15 01:50	1
Acenaphthylene	ND		0.012		ug/L		09/19/15 14:58	10/04/15 01:50	1
Acenaphthene	ND		0.012		ug/L		09/19/15 14:58	10/04/15 01:50	1
Fluorene	ND		0.012		ug/L		09/19/15 14:58	10/04/15 01:50	1
Phenanthrene	ND		0.12		ug/L		09/19/15 14:58	10/04/15 01:50	1
Anthracene	ND		0.031		ug/L		09/19/15 14:58	10/04/15 01:50	1
Fluoranthene	ND		0.062		ug/L		09/19/15 14:58	10/04/15 01:50	1
Pyrene	ND		0.062		ug/L		09/19/15 14:58	10/04/15 01:50	1
Benzo[a]anthracene	ND		0.012		ug/L		09/19/15 14:58	10/04/15 01:50	1
Chrysene	ND		0.012		ug/L		09/19/15 14:58	10/04/15 01:50	1
Benzo[a]pyrene	ND		0.012		ug/L		09/19/15 14:58	10/04/15 01:50	1
Indeno[1,2,3-cd]pyrene	ND		0.012		ug/L		09/19/15 14:58	10/04/15 01:50	1
Dibenz(a,h)anthracene	ND		0.012		ug/L		09/19/15 14:58	10/04/15 01:50	1
Benzo[g,h,i]perylene	ND		0.012		ug/L		09/19/15 14:58	10/04/15 01:50	1
Benzo[b]fluoranthene	ND		0.012		ug/L		09/19/15 14:58	10/04/15 01:50	1
Benzo[k]fluoranthene	ND		0.012		ug/L		09/19/15 14:58	10/04/15 01:50	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Terphenyl-d14	83			64 - 150				09/19/15 14:58	10/04/15 01:50

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050		mg/L			09/26/15 00:10	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	93			50 - 150				09/26/15 00:10	1
Trifluorotoluene (Surr)	102			50 - 150				09/26/15 00:10	1

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.56		mg/L		09/23/15 12:56	09/28/15 18:13	5
Motor Oil (>C24-C36)	ND		1.3		mg/L		09/23/15 12:56	09/28/15 18:13	5

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53364-1

SDG: 354972

**Client Sample ID: U-24B-Cutoff-Phillips**

Date Collected: 09/16/15 08:45

Date Received: 09/16/15 12:50

**Lab Sample ID: 580-53364-8**

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o-Terphenyl</i>	85		50 - 150	09/23/15 12:56	09/28/15 18:13	5

**Method: 1631E - Mercury, Low Level (CVAFS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.50		ng/L	D	09/23/15 16:34	09/25/15 15:54	1

**Method: 6020 - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0050		mg/L	D	09/28/15 13:00	09/28/15 23:35	5
<b>Barium</b>	<b>0.11</b>		0.0060		mg/L	D	09/28/15 13:00	09/28/15 23:35	5
Cadmium	ND		0.0020		mg/L	D	09/28/15 13:00	09/28/15 23:35	5
Chromium	ND		0.0020		mg/L	D	09/28/15 13:00	09/28/15 23:35	5
Copper	ND		0.010		mg/L	D	09/28/15 13:00	09/28/15 23:35	5
Lead	ND		0.0020		mg/L	D	09/28/15 13:00	09/28/15 23:35	5
<b>Manganese</b>	<b>2.1</b>		0.010		mg/L	D	09/28/15 13:00	09/28/15 23:35	5
Selenium	ND		0.0050		mg/L	D	09/28/15 13:00	09/28/15 23:35	5
Silver	ND		0.0020		mg/L	D	09/28/15 13:00	09/28/15 23:35	5
Zinc	ND		0.035		mg/L	D	09/28/15 13:00	09/28/15 23:35	5

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53364-1

SDG: 354972

**Client Sample ID: U-24A-Cutoff-Phillips**

**Lab Sample ID: 580-53364-9**

**Matrix: Water**

Date Collected: 09/16/15 08:20

Date Received: 09/16/15 12:50

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			09/30/15 15:55	1
Ethylbenzene	ND		3.0		ug/L			09/30/15 15:55	1
<b>Methyl tert-butyl ether</b>	<b>1.1</b>		1.0		ug/L			09/30/15 15:55	1
m-Xylene & p-Xylene	ND		3.0		ug/L			09/30/15 15:55	1
o-Xylene	ND		2.0		ug/L			09/30/15 15:55	1
Toluene	ND		2.0		ug/L			09/30/15 15:55	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	105			75 - 120				09/30/15 15:55	1
Dibromofluoromethane (Surr)	100			85 - 115				09/30/15 15:55	1
1,2-Dichloroethane-d4 (Surr)	107			70 - 120				09/30/15 15:55	1
Toluene-d8 (Surr)	103			85 - 120				09/30/15 15:55	1
Trifluorotoluene (Surr)	103			70 - 136				09/30/15 15:55	1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Naphthalene</b>	<b>0.027</b>		0.0098		ug/L		09/19/15 14:58	10/04/15 02:13	1
2-Methylnaphthalene	ND		0.013		ug/L		09/19/15 14:58	10/04/15 02:13	1
1-Methylnaphthalene	ND		0.0098		ug/L		09/19/15 14:58	10/04/15 02:13	1
Phenanthrene	ND		0.098		ug/L		09/19/15 14:58	10/04/15 02:13	1
Anthracene	ND		0.024		ug/L		09/19/15 14:58	10/04/15 02:13	1
Fluoranthene	ND		0.049		ug/L		09/19/15 14:58	10/04/15 02:13	1
Pyrene	ND		0.049		ug/L		09/19/15 14:58	10/04/15 02:13	1
Benzo[a]anthracene	ND		0.0098		ug/L		09/19/15 14:58	10/04/15 02:13	1
Chrysene	ND		0.0098		ug/L		09/19/15 14:58	10/04/15 02:13	1
Benzo[a]pyrene	ND		0.0098		ug/L		09/19/15 14:58	10/04/15 02:13	1
Indeno[1,2,3-cd]pyrene	ND		0.0098		ug/L		09/19/15 14:58	10/04/15 02:13	1
Dibenz(a,h)anthracene	ND		0.0098		ug/L		09/19/15 14:58	10/04/15 02:13	1
Benzo[g,h,i]perylene	ND		0.0098		ug/L		09/19/15 14:58	10/04/15 02:13	1
Benzo[b]fluoranthene	ND		0.0098		ug/L		09/19/15 14:58	10/04/15 02:13	1
Benzo[k]fluoranthene	ND		0.0098		ug/L		09/19/15 14:58	10/04/15 02:13	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Terphenyl-d14	89			64 - 150				09/19/15 14:58	10/04/15 02:13

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) - DL

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthylene	ND		0.098		ug/L		09/19/15 14:58	10/24/15 12:50	10
Acenaphthene	ND		0.098		ug/L		09/19/15 14:58	10/24/15 12:50	10
Fluorene	ND		0.098		ug/L		09/19/15 14:58	10/24/15 12:50	10
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Terphenyl-d14	105			64 - 150				09/19/15 14:58	10/24/15 12:50

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050		mg/L			09/26/15 01:15	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	93		50 - 150					09/26/15 01:15	1
Trifluorotoluene (Surr)	104		50 - 150					09/26/15 01:15	1

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53364-1

SDG: 354972

**Client Sample ID: U-24A-Cutoff-Phillips**

Date Collected: 09/16/15 08:20

Date Received: 09/16/15 12:50

**Lab Sample ID: 580-53364-9**

Matrix: Water

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	1.3		0.54		mg/L		09/23/15 12:56	09/28/15 18:49	5
Motor Oil (>C24-C36)	ND		1.2		mg/L		09/23/15 12:56	09/28/15 18:49	5
<b>Surrogate</b>	<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
<i>o-Terphenyl</i>	93		50 - 150				09/23/15 12:56	09/28/15 18:49	5

## Method: 1631E - Mercury, Low Level (CVAFS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	2.4		1.0		ng/L		09/23/15 16:34	09/25/15 15:58	2

## Method: 6020 - Metals (ICP/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.015		0.0050		mg/L		09/28/15 13:00	09/28/15 22:36	5
Barium	0.097		0.0060		mg/L		09/28/15 13:00	09/28/15 22:36	5
Cadmium	ND		0.0020		mg/L		09/28/15 13:00	09/28/15 22:36	5
Chromium	0.0040		0.0020		mg/L		09/28/15 13:00	09/28/15 22:36	5
Copper	ND		0.010		mg/L		09/28/15 13:00	09/28/15 22:36	5
Lead	ND		0.0020		mg/L		09/28/15 13:00	09/28/15 22:36	5
Manganese	6.0		0.010		mg/L		09/28/15 13:00	09/28/15 22:36	5
Selenium	ND		0.0050		mg/L		09/28/15 13:00	09/28/15 22:36	5
Silver	ND		0.0020		mg/L		09/28/15 13:00	09/28/15 22:36	5
Zinc	ND		0.035		mg/L		09/28/15 13:00	09/28/15 22:36	5

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TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53364-1

SDG: 354972

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 580-201996/4**

**Matrix: Water**

**Analysis Batch: 201996**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		2.0		ug/L			09/29/15 12:20	1
Ethylbenzene	ND		3.0		ug/L			09/29/15 12:20	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/29/15 12:20	1
m-Xylene & p-Xylene	ND		3.0		ug/L			09/29/15 12:20	1
o-Xylene	ND		2.0		ug/L			09/29/15 12:20	1
Toluene	ND		2.0		ug/L			09/29/15 12:20	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	108		75 - 120			1
Dibromofluoromethane (Surr)	106		85 - 115			1
1,2-Dichloroethane-d4 (Surr)	109		70 - 120			1
Toluene-d8 (Surr)	95		85 - 120			1
Trifluorotoluene (Surr)	102		70 - 136			1

**Lab Sample ID: LCS 580-201996/5**

**Matrix: Water**

**Analysis Batch: 201996**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike	LCS	LCS	D	%Rec	%Rec.	Limits
	Added	Result	Qualifier				
Benzene	20.1	19.4		ug/L	96	80 - 120	
Ethylbenzene	20.1	18.6		ug/L	93	75 - 125	
Methyl tert-butyl ether	20.0	21.7		ug/L	108	65 - 125	
m-Xylene & p-Xylene	20.0	19.6		ug/L	98	75 - 130	
o-Xylene	20.0	20.0		ug/L	100	80 - 120	
Toluene	20.0	18.8		ug/L	94	75 - 120	

Surrogate	LCS	LCS	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	106		75 - 120			1
Dibromofluoromethane (Surr)	106		85 - 115			1
1,2-Dichloroethane-d4 (Surr)	111		70 - 120			1
Toluene-d8 (Surr)	96		85 - 120			1
Trifluorotoluene (Surr)	99		70 - 136			1

**Lab Sample ID: LCSD 580-201996/6**

**Matrix: Water**

**Analysis Batch: 201996**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike	LCSD	LCSD	D	%Rec	%Rec.	RPD	RPD Limit
	Added	Result	Qualifier					
Benzene	20.1	19.0		ug/L	95	80 - 120	2	30
Ethylbenzene	20.1	18.3		ug/L	91	75 - 125	2	30
Methyl tert-butyl ether	20.0	22.1		ug/L	110	65 - 125	2	30
m-Xylene & p-Xylene	20.0	19.5		ug/L	97	75 - 130	0	30
o-Xylene	20.0	19.8		ug/L	99	80 - 120	1	30
Toluene	20.0	18.4		ug/L	92	75 - 120	2	30

Surrogate	LCSD	LCSD	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	105		75 - 120			1

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53364-1

SDG: 354972

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 580-201996/6**

**Matrix: Water**

**Analysis Batch: 201996**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Dibromofluoromethane (Surr)	105		85 - 115
1,2-Dichloroethane-d4 (Surr)	109		70 - 120
Toluene-d8 (Surr)	96		85 - 120
Trifluorotoluene (Surr)	99		70 - 136

**Lab Sample ID: MB 580-202098/4**

**Matrix: Water**

**Analysis Batch: 202098**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			09/30/15 12:28	1
Ethylbenzene	ND		3.0		ug/L			09/30/15 12:28	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/30/15 12:28	1
m-Xylene & p-Xylene	ND		3.0		ug/L			09/30/15 12:28	1
o-Xylene	ND		2.0		ug/L			09/30/15 12:28	1
Toluene	ND		2.0		ug/L			09/30/15 12:28	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	103		75 - 120		09/30/15 12:28	1
Dibromofluoromethane (Surr)	99		85 - 115		09/30/15 12:28	1
1,2-Dichloroethane-d4 (Surr)	103		70 - 120		09/30/15 12:28	1
Toluene-d8 (Surr)	102		85 - 120		09/30/15 12:28	1
Trifluorotoluene (Surr)	99		70 - 136		09/30/15 12:28	1

**Lab Sample ID: LCS 580-202098/5**

**Matrix: Water**

**Analysis Batch: 202098**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	Limits
Benzene	20.1	17.8		ug/L		89	80 - 120
Ethylbenzene	20.1	18.6		ug/L		93	75 - 125
Methyl tert-butyl ether	20.0	18.0		ug/L		90	65 - 125
m-Xylene & p-Xylene	20.0	18.8		ug/L		94	75 - 130
o-Xylene	20.0	18.5		ug/L		92	80 - 120
Toluene	20.0	18.3		ug/L		92	75 - 120

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	104		75 - 120
Dibromofluoromethane (Surr)	99		85 - 115
1,2-Dichloroethane-d4 (Surr)	101		70 - 120
Toluene-d8 (Surr)	99		85 - 120
Trifluorotoluene (Surr)	101		70 - 136

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53364-1

SDG: 354972

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 580-202098/6**

**Matrix: Water**

**Analysis Batch: 202098**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Benzene	20.1	17.9		ug/L		89	80 - 120	1	30
Ethylbenzene	20.1	18.7		ug/L		93	75 - 125	1	30
Methyl tert-butyl ether	20.0	18.3		ug/L		91	65 - 125	1	30
m-Xylene & p-Xylene	20.0	18.8		ug/L		94	75 - 130	0	30
o-Xylene	20.0	18.6		ug/L		93	80 - 120	1	30
Toluene	20.0	18.5		ug/L		92	75 - 120	1	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	103		75 - 120
Dibromofluoromethane (Surr)	99		85 - 115
1,2-Dichloroethane-d4 (Surr)	97		70 - 120
Toluene-d8 (Surr)	99		85 - 120
Trifluorotoluene (Surr)	100		70 - 136

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

**Lab Sample ID: MB 580-201261/1-A**

**Matrix: Water**

**Analysis Batch: 202430**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**  
**Prep Batch: 201261**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.010		ug/L		09/19/15 14:58	10/03/15 16:35	1
2-Methylnaphthalene	ND		0.013		ug/L		09/19/15 14:58	10/03/15 16:35	1
1-Methylnaphthalene	ND		0.010		ug/L		09/19/15 14:58	10/03/15 16:35	1
Acenaphthylene	ND		0.010		ug/L		09/19/15 14:58	10/03/15 16:35	1
Acenaphthene	ND		0.010		ug/L		09/19/15 14:58	10/03/15 16:35	1
Fluorene	ND		0.010		ug/L		09/19/15 14:58	10/03/15 16:35	1
Phenanthrene	ND		0.10		ug/L		09/19/15 14:58	10/03/15 16:35	1
Anthracene	ND		0.025		ug/L		09/19/15 14:58	10/03/15 16:35	1
Fluoranthene	ND		0.050		ug/L		09/19/15 14:58	10/03/15 16:35	1
Pyrene	ND		0.050		ug/L		09/19/15 14:58	10/03/15 16:35	1
Benzo[a]anthracene	ND		0.010		ug/L		09/19/15 14:58	10/03/15 16:35	1
Chrysene	ND		0.010		ug/L		09/19/15 14:58	10/03/15 16:35	1
Benzo[a]pyrene	ND		0.010		ug/L		09/19/15 14:58	10/03/15 16:35	1
Indeno[1,2,3-cd]pyrene	ND		0.010		ug/L		09/19/15 14:58	10/03/15 16:35	1
Dibenzo(a,h)anthracene	ND		0.010		ug/L		09/19/15 14:58	10/03/15 16:35	1
Benzo[g,h,i]perylene	ND		0.010		ug/L		09/19/15 14:58	10/03/15 16:35	1
Benzo[b]fluoranthene	ND		0.010		ug/L		09/19/15 14:58	10/03/15 16:35	1
Benzo[k]fluoranthene	ND		0.010		ug/L		09/19/15 14:58	10/03/15 16:35	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
Terphenyl-d14	94		64 - 150	09/19/15 14:58	10/03/15 16:35	1

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53364-1

SDG: 354972

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

**Lab Sample ID: LCS 580-201261/2-A**

**Matrix: Water**

**Analysis Batch: 202430**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 201261**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Naphthalene	1.00	0.683		ug/L	68	54 - 106	
2-Methylnaphthalene	1.00	0.741		ug/L	74	54 - 114	
1-Methylnaphthalene	1.00	0.730		ug/L	73	57 - 115	
Acenaphthylene	1.00	0.667		ug/L	67	30 - 127	
Acenaphthene	1.00	0.680		ug/L	68	54 - 109	
Fluorene	1.00	0.745		ug/L	74	50 - 130	
Phenanthrene	1.00	0.765		ug/L	76	53 - 115	
Anthracene	1.00	0.533		ug/L	53	30 - 130	
Fluoranthene	1.00	0.710		ug/L	71	58 - 128	
Pyrene	1.00	0.683		ug/L	68	53 - 121	
Benzo[a]anthracene	1.00	0.636		ug/L	64	35 - 125	
Chrysene	1.00	0.736		ug/L	74	57 - 120	
Benzo[a]pyrene	1.00	0.531		ug/L	53	30 - 127	
Indeno[1,2,3-cd]pyrene	1.00	0.845		ug/L	85	53 - 131	
Dibenz(a,h)anthracene	1.00	0.869		ug/L	87	60 - 136	
Benzo[g,h,i]perylene	1.00	0.766		ug/L	77	51 - 128	
Benzo[b]fluoranthene	1.00	0.782		ug/L	78	59 - 126	
Benzo[k]fluoranthene	1.00	0.685		ug/L	68	49 - 136	
<b>Surrogate</b>		<b>LCS</b>	<b>LCS</b>				
		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			
Terphenyl-d14		83		64 - 150			

**Lab Sample ID: LCSD 580-201261/3-A**

**Matrix: Water**

**Analysis Batch: 202430**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 201261**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Naphthalene	1.00	0.709		ug/L	71	54 - 106		4	20
2-Methylnaphthalene	1.00	0.785		ug/L	79	54 - 114		6	20
1-Methylnaphthalene	1.00	0.766		ug/L	77	57 - 115		5	20
Acenaphthylene	1.00	0.697		ug/L	70	30 - 127		4	20
Acenaphthene	1.00	0.705		ug/L	71	54 - 109		4	20
Fluorene	1.00	0.775		ug/L	77	50 - 130		4	20
Phenanthrene	1.00	0.781		ug/L	78	53 - 115		2	20
Anthracene	1.00	0.570		ug/L	57	30 - 130		7	20
Fluoranthene	1.00	0.736		ug/L	74	58 - 128		4	20
Pyrene	1.00	0.707		ug/L	71	53 - 121		3	20
Benzo[a]anthracene	1.00	0.658		ug/L	66	35 - 125		3	20
Chrysene	1.00	0.757		ug/L	76	57 - 120		3	20
Benzo[a]pyrene	1.00	0.550		ug/L	55	30 - 127		4	20
Indeno[1,2,3-cd]pyrene	1.00	0.869		ug/L	87	53 - 131		3	20
Dibenz(a,h)anthracene	1.00	0.897		ug/L	90	60 - 136		3	20
Benzo[g,h,i]perylene	1.00	0.787		ug/L	79	51 - 128		3	20
Benzo[b]fluoranthene	1.00	0.809		ug/L	81	59 - 126		3	20
Benzo[k]fluoranthene	1.00	0.709		ug/L	71	49 - 136		4	20

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53364-1

SDG: 354972

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: LCSD 580-201261/3-A

Matrix: Water

Analysis Batch: 202430

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 201261

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Terphenyl-d14	87		64 - 150

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Lab Sample ID: MB 580-201677/5

Matrix: Water

Analysis Batch: 201677

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit mg/L	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050					09/24/15 16:47	1
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<hr/>									
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
4-Bromofluorobenzene (Surr)	98		50 - 150		09/24/15 16:47	1			
Trifluorotoluene (Surr)	111		50 - 150		09/24/15 16:47	1			

Lab Sample ID: LCS 580-201677/6

Matrix: Water

Analysis Batch: 201677

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit mg/L	D	%Rec	%Rec.
Gasoline	1.16	0.951			82	79 - 110	
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<hr/>							
Surrogate	%Recovery	Qualifier	Limits				
4-Bromofluorobenzene (Surr)	100		50 - 150				
Trifluorotoluene (Surr)	111		50 - 150				

Lab Sample ID: LCSD 580-201677/7

Matrix: Water

Analysis Batch: 201677

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit mg/L	D	%Rec	%Rec.	RPD
Gasoline	1.16	0.971			84	79 - 110		2
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Surrogate	%Recovery	Qualifier	Limits					
4-Bromofluorobenzene (Surr)	103		50 - 150					
Trifluorotoluene (Surr)	107		50 - 150					

Lab Sample ID: MB 580-201801/5

Matrix: Water

Analysis Batch: 201801

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit mg/L	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050					09/25/15 19:12	1
<hr/>									
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<hr/>									
Surrogate	%Recovery	Qualifier	Limits						
4-Bromofluorobenzene (Surr)	92		50 - 150					09/25/15 19:12	1

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53364-1

SDG: 354972

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC) (Continued)

**Lab Sample ID: MB 580-201801/5**

**Matrix: Water**

**Analysis Batch: 201801**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Surrogate	MB	MB	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
Trifluorotoluene (Surr)			107		50 - 150		09/25/15 19:12	1

**Lab Sample ID: LCS 580-201801/6**

**Matrix: Water**

**Analysis Batch: 201801**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spiked	LCS	LCS	Unit	D	%Rec.	Limits
	Added	Result	Qualifier				
Gasoline		1.06		mg/L		91	79 - 110
<b>Surrogate</b>							
Surrogate	LCS	LCS	Qualifer	Unit	D	%Rec.	Limits
	%Recovery	Qualifier	Limits				
4-Bromofluorobenzene (Surr)	98		50 - 150				
Trifluorotoluene (Surr)	111		50 - 150				

**Lab Sample ID: LCSD 580-201801/7**

**Matrix: Water**

**Analysis Batch: 201801**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spiked	LCSD	LCSD	Unit	D	%Rec.	Limits	RPD	RPD Limit
	Added	Result	Qualifier						
Gasoline		1.08		mg/L		93	79 - 110	2	20
<b>Surrogate</b>									
Surrogate	LCSD	LCSD	Qualifer	Unit	D	%Rec.	Limits	RPD	RPD Limit
	%Recovery	Qualifier	Limits						
4-Bromofluorobenzene (Surr)	99		50 - 150						
Trifluorotoluene (Surr)	113		50 - 150						

**Lab Sample ID: 580-53447-B-4 MSD**

**Matrix: Water**

**Analysis Batch: 201801**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total/NA**

Analyte	Sample	Sample	Spiked	MSD	MSD	Unit	D	%Rec.	RPD	RPD Limit
	Result	Qualifier	Added	Result	Qualifier					
Gasoline	1.0			1.98		mg/L		85	50 - 150	3 35
<b>Surrogate</b>										
Surrogate	MSD	MSD	Qualifer	Unit	D	%Rec.	Limits	RPD	RPD Limit	
	%Recovery	Qualifier	Limits							
4-Bromofluorobenzene (Surr)	118		50 - 150							
Trifluorotoluene (Surr)	113		50 - 150							

**Lab Sample ID: 580-53447-E-4 MS**

**Matrix: Water**

**Analysis Batch: 201801**

**Client Sample ID: Matrix Spike**

**Prep Type: Total/NA**

Analyte	Sample	Sample	Spiked	MS	MS	Unit	D	%Rec.	RPD	RPD Limit
	Result	Qualifier	Added	Result	Qualifier					
Gasoline	1.0			2.04		mg/L		90	50 - 150	
<b>Surrogate</b>										
Surrogate	MS	MS	Qualifer	Unit	D	%Rec.	Limits	RPD	RPD Limit	
	%Recovery	Qualifier	Limits							
4-Bromofluorobenzene (Surr)	118		50 - 150							
Trifluorotoluene (Surr)	111		50 - 150							

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53364-1

SDG: 354972

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

**Lab Sample ID: MB 580-201524/1-A**

**Matrix: Water**

**Analysis Batch: 201839**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 201524**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.11	mg/L		09/23/15 12:56	09/28/15 15:30		1
Motor Oil (>C24-C36)	ND		0.25	mg/L		09/23/15 12:56	09/28/15 15:30		1
<b>Surrogate</b>									
<i>o-Terphenyl</i>									
<b>MB MB</b>									
<b>%Recovery Qualifier Limits</b>									
98 50 - 150									

**Lab Sample ID: LCS 580-201524/2-A**

**Matrix: Water**

**Analysis Batch: 201839**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 201524**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	RPD
#2 Diesel (C10-C24)	0.500	0.596	mg/L		119	59 - 120	
Motor Oil (>C24-C36)	0.502	0.547	mg/L		109	71 - 140	
<b>Surrogate</b>							
<i>o-Terphenyl</i>							
<b>LCS LCS</b>							
<b>%Recovery Qualifier Limits</b>							
113 50 - 150							

**Lab Sample ID: LCSD 580-201524/3-A**

**Matrix: Water**

**Analysis Batch: 201839**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 201524**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec.	RPD
#2 Diesel (C10-C24)	0.500	0.534	mg/L		107	59 - 120	11
Motor Oil (>C24-C36)	0.502	0.486	mg/L		97	71 - 140	12
<b>Surrogate</b>							
<i>o-Terphenyl</i>							
<b>LCSD LCSD</b>							
<b>%Recovery Qualifier Limits</b>							
105 50 - 150							

## Method: 1631E - Mercury, Low Level (CVAFS)

**Lab Sample ID: MB 240-198892/1-A**

**Matrix: Water**

**Analysis Batch: 199370**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 198892**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.50	ng/L		09/23/15 16:34	09/25/15 10:25		1

**Lab Sample ID: LCS 240-198892/2-A**

**Matrix: Water**

**Analysis Batch: 199354**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 198892**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	RPD
Mercury	1.63	1.73	ng/L		106	77 - 123	

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53364-1

SDG: 354972

## Method: 1631E - Mercury, Low Level (CVAFS) (Continued)

**Lab Sample ID: 240-55432-A-6-B MS ^10**

**Matrix: Water**

**Analysis Batch: 199370**

**Client Sample ID: Matrix Spike**

**Prep Type: Total/NA**

**Prep Batch: 198892**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec.	Limits
Mercury	49		50.0	88.8		ng/L	79	71 - 125	

**Lab Sample ID: 240-55432-A-6-C MSD ^10**

**Matrix: Water**

**Analysis Batch: 199370**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total/NA**

**Prep Batch: 198892**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	RPD	Limit
Mercury	49		50.0	91.8		ng/L	85	71 - 125	3	24

## Method: 6020 - Metals (ICP/MS)

**Lab Sample ID: MB 580-201911/20-A**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 201911**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0050		mg/L		09/28/15 13:00	09/28/15 22:18	5
Barium	ND		0.0060		mg/L		09/28/15 13:00	09/28/15 22:18	5
Cadmium	ND		0.0020		mg/L		09/28/15 13:00	09/28/15 22:18	5
Chromium	ND		0.0020		mg/L		09/28/15 13:00	09/28/15 22:18	5
Copper	ND		0.010		mg/L		09/28/15 13:00	09/28/15 22:18	5
Lead	ND		0.0020		mg/L		09/28/15 13:00	09/28/15 22:18	5
Manganese	ND		0.010		mg/L		09/28/15 13:00	09/28/15 22:18	5
Selenium	ND		0.0050		mg/L		09/28/15 13:00	09/28/15 22:18	5
Silver	ND		0.0020		mg/L		09/28/15 13:00	09/28/15 22:18	5
Zinc	ND		0.035		mg/L		09/28/15 13:00	09/28/15 22:18	5

**Lab Sample ID: LCS 580-201911/21-A**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 201911**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	Limits
Arsenic	4.00	4.10		mg/L	102	80 - 120	
Barium	4.00	4.21		mg/L	105	80 - 120	
Cadmium	0.100	0.104		mg/L	104	80 - 120	
Chromium	0.400	0.393		mg/L	98	80 - 120	
Copper	0.500	0.500		mg/L	100	80 - 120	
Lead	1.00	0.939		mg/L	94	80 - 120	
Manganese	1.00	1.01		mg/L	101	80 - 120	
Selenium	4.00	4.25		mg/L	106	80 - 120	
Silver	0.600	0.588		mg/L	98	80 - 120	
Zinc	4.00	4.03		mg/L	101	80 - 120	

**Lab Sample ID: LCSD 580-201911/22-A**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 201911**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec.	RPD
Arsenic	4.00	4.07		mg/L	102	80 - 120	1 / 20

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53364-1

SDG: 354972

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: LCSD 580-201911/22-A**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 201911**

Analyte	Spike Added	LCSD		Unit	D	%Rec	Limits	RPD	Limit
		Result	Qualifier						
Barium	4.00	4.14		mg/L	103	80 - 120	2	20	
Cadmium	0.100	0.104		mg/L	104	80 - 120	0	20	
Chromium	0.400	0.392		mg/L	98	80 - 120	0	20	
Copper	0.500	0.502		mg/L	100	80 - 120	0	20	
Lead	1.00	0.930		mg/L	93	80 - 120	1	20	
Manganese	1.00	1.01		mg/L	101	80 - 120	0	20	
Selenium	4.00	4.21		mg/L	105	80 - 120	1	20	
Silver	0.600	0.582		mg/L	97	80 - 120	1	20	
Zinc	4.00	4.01		mg/L	100	80 - 120	1	20	

**Lab Sample ID: 580-53364-9 MS**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: U-24A-Cutoff-Phillips**

**Prep Type: Total/NA**

**Prep Batch: 201911**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS		Unit	D	%Rec	Limits	RPD	Limit
				Result	Qualifier						
Arsenic	0.015		4.00	4.10		mg/L	102	80 - 120			
Barium	0.097		4.00	4.22		mg/L	103	80 - 120			
Cadmium	ND		0.100	0.103		mg/L	103	80 - 120			
Chromium	0.0040		0.400	0.402		mg/L	100	80 - 120			
Copper	ND		0.500	0.509		mg/L	102	80 - 120			
Lead	ND		1.00	0.957		mg/L	96	80 - 120			
Manganese	6.0		1.00	6.41	4	mg/L	39	80 - 120			
Selenium	ND		4.00	4.27		mg/L	107	80 - 120			
Silver	ND		0.600	0.581		mg/L	97	80 - 120			
Zinc	ND		4.00	4.07		mg/L	101	80 - 120			

**Lab Sample ID: 580-53364-9 MSD**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: U-24A-Cutoff-Phillips**

**Prep Type: Total/NA**

**Prep Batch: 201911**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD		Unit	D	%Rec	Limits	RPD	Limit
				Result	Qualifier						
Arsenic	0.015		4.00	4.38		mg/L	109	80 - 120	7	20	
Barium	0.097		4.00	4.55		mg/L	111	80 - 120	8	20	
Cadmium	ND		0.100	0.113		mg/L	113	80 - 120	10	20	
Chromium	0.0040		0.400	0.434		mg/L	108	80 - 120	8	20	
Copper	ND		0.500	0.541		mg/L	108	80 - 120	6	20	
Lead	ND		1.00	1.02		mg/L	102	80 - 120	7	20	
Manganese	6.0		1.00	6.94	4	mg/L	92	80 - 120	8	20	
Selenium	ND		4.00	4.44		mg/L	111	80 - 120	4	20	
Silver	ND		0.600	0.613		mg/L	102	80 - 120	5	20	
Zinc	ND		4.00	4.35		mg/L	108	80 - 120	7	20	

**Lab Sample ID: 580-53364-9 DU**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: U-24A-Cutoff-Phillips**

**Prep Type: Total/NA**

**Prep Batch: 201911**

Analyte	Sample Result	Sample Qualifier	DU		Unit	D	RPD	Limit
			Result	Qualifier				
Arsenic	0.015		0.0147		mg/L		2	20
Barium	0.097		0.0981		mg/L		1	20

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53364-1

SDG: 354972

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: 580-53364-9 DU**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: U-24A-Cutoff-Phillips**

**Prep Type: Total/NA**

**Prep Batch: 201911**

**RPD**

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Cadmium	ND		ND		mg/L		NC	20
Chromium	0.0040		0.00364		mg/L		9	20
Copper	ND		ND		mg/L		NC	20
Lead	ND		ND		mg/L		NC	20
Manganese	6.0		6.06		mg/L		0.6	20
Selenium	ND		ND		mg/L		NC	20
Silver	ND		ND		mg/L		NC	20
Zinc	ND		ND		mg/L		NC	20

# Lab Chronicle

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53364-1

SDG: 354972

## Client Sample ID: Trip Blanks

Date Collected: 09/15/15 00:00

Date Received: 09/16/15 12:50

## Lab Sample ID: 580-53364-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	201996	09/29/15 14:34	ANA	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	201677	09/24/15 18:19	TL1	TAL SEA

## Client Sample ID: U-22B-Cutoff-Phillips

Date Collected: 09/15/15 13:00

Date Received: 09/16/15 12:50

## Lab Sample ID: 580-53364-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	201996	09/29/15 15:28	ANA	TAL SEA
Total/NA	Prep	3520C			201261	09/19/15 14:58	JDR	TAL SEA
Total/NA	Analysis	8270C SIM		1	202430	10/03/15 23:32	AHP	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	201801	09/25/15 20:51	HDK	TAL SEA
Total/NA	Prep	3510C			201524	09/23/15 12:56	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		5	201839	09/28/15 16:24	KW	TAL SEA
Total/NA	Prep	1631E			198892	09/23/15 16:34	DSH	TAL CAN
Total/NA	Analysis	1631E		1	199370	09/25/15 11:41	DSH	TAL CAN
Total/NA	Prep	3010A			201911	09/28/15 13:00	PAB	TAL SEA
Total/NA	Analysis	6020		5	201970	09/28/15 23:08	FCW	TAL SEA

## Client Sample ID: BD-Cutoff-Phillips-1

Date Collected: 09/15/15 00:00

Date Received: 09/16/15 12:50

## Lab Sample ID: 580-53364-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	201996	09/29/15 15:54	ANA	TAL SEA
Total/NA	Prep	3520C			201261	09/19/15 14:58	JDR	TAL SEA
Total/NA	Analysis	8270C SIM		1	202430	10/03/15 23:55	AHP	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	201801	09/25/15 21:24	HDK	TAL SEA
Total/NA	Prep	3510C			201524	09/23/15 12:56	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		5	201839	09/28/15 16:43	KW	TAL SEA
Total/NA	Prep	1631E			198892	09/23/15 16:34	DSH	TAL CAN
Total/NA	Analysis	1631E		1	199370	09/25/15 11:45	DSH	TAL CAN
Total/NA	Prep	3010A			201911	09/28/15 13:00	PAB	TAL SEA
Total/NA	Analysis	6020		5	201970	09/28/15 23:12	FCW	TAL SEA

## Client Sample ID: U-22A-Cutoff-Phillips

Date Collected: 09/15/15 12:30

Date Received: 09/16/15 12:50

## Lab Sample ID: 580-53364-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	201996	09/29/15 16:21	ANA	TAL SEA
Total/NA	Prep	3520C			201261	09/19/15 14:58	JDR	TAL SEA

TestAmerica Seattle

# Lab Chronicle

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53364-1

SDG: 354972

**Client Sample ID: U-22A-Cutoff-Phillips**

Date Collected: 09/15/15 12:30

Date Received: 09/16/15 12:50

**Lab Sample ID: 580-53364-4**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8270C SIM		1	202430	10/04/15 00:18	AHP	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	201801	09/25/15 21:57	HDK	TAL SEA
Total/NA	Prep	3510C			201524	09/23/15 12:56	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		5	201839	09/28/15 17:01	KW	TAL SEA
Total/NA	Prep	1631E			198892	09/23/15 16:34	DSH	TAL CAN
Total/NA	Analysis	1631E		1	199370	09/25/15 11:48	DSH	TAL CAN
Total/NA	Prep	3010A			201911	09/28/15 13:00	PAB	TAL SEA
Total/NA	Analysis	6020		5	201970	09/28/15 23:17	FCW	TAL SEA

**Client Sample ID: U-23-Cutoff-Phillips**

Date Collected: 09/15/15 14:00

Date Received: 09/16/15 12:50

**Lab Sample ID: 580-53364-5**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	201996	09/29/15 16:48	ANA	TAL SEA
Total/NA	Prep	3520C			201261	09/19/15 14:58	JDR	TAL SEA
Total/NA	Analysis	8270C SIM		1	202430	10/04/15 00:41	AHP	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	201801	09/25/15 22:30	HDK	TAL SEA
Total/NA	Prep	3510C			201524	09/23/15 12:56	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		10	201839	09/28/15 17:19	KW	TAL SEA
Total/NA	Prep	1631E			198892	09/23/15 16:34	DSH	TAL CAN
Total/NA	Analysis	1631E		1	199370	09/25/15 11:52	DSH	TAL CAN
Total/NA	Prep	3010A			201911	09/28/15 13:00	PAB	TAL SEA
Total/NA	Analysis	6020		5	201970	09/28/15 23:22	FCW	TAL SEA

**Client Sample ID: U-26-Cutoff-Phillips**

Date Collected: 09/16/15 10:00

Date Received: 09/16/15 12:50

**Lab Sample ID: 580-53364-6**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	202098	09/30/15 14:33	D1R	TAL SEA
Total/NA	Prep	3520C			201261	09/19/15 14:58	JDR	TAL SEA
Total/NA	Analysis	8270C SIM		1	202430	10/04/15 01:04	AHP	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	201801	09/25/15 23:03	HDK	TAL SEA
Total/NA	Prep	3510C			201524	09/23/15 12:56	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		5	201839	09/28/15 17:37	KW	TAL SEA
Total/NA	Prep	1631E			198892	09/23/15 16:34	DSH	TAL CAN
Total/NA	Analysis	1631E		1	199370	09/25/15 11:56	DSH	TAL CAN
Total/NA	Prep	3010A			201911	09/28/15 13:00	PAB	TAL SEA
Total/NA	Analysis	6020		5	201970	09/28/15 23:26	FCW	TAL SEA

TestAmerica Seattle

# Lab Chronicle

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53364-1

SDG: 354972

**Client Sample ID: U-25-Cutoff-Phillips**

Date Collected: 09/16/15 09:30

Date Received: 09/16/15 12:50

**Lab Sample ID: 580-53364-7**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	202098	09/30/15 15:00	D1R	TAL SEA
Total/NA	Prep	3520C			201261	09/19/15 14:58	JDR	TAL SEA
Total/NA	Analysis	8270C SIM		1	202430	10/04/15 01:27	AHP	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	201801	09/25/15 23:36	HDK	TAL SEA
Total/NA	Prep	3510C			201524	09/23/15 12:56	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		5	201839	09/28/15 17:55	KW	TAL SEA
Total/NA	Prep	1631E			198892	09/23/15 16:34	DSH	TAL CAN
Total/NA	Analysis	1631E		1	199370	09/25/15 11:59	DSH	TAL CAN
Total/NA	Prep	3010A			201911	09/28/15 13:00	PAB	TAL SEA
Total/NA	Analysis	6020		5	201970	09/28/15 23:31	FCW	TAL SEA

**Client Sample ID: U-24B-Cutoff-Phillips**

Date Collected: 09/16/15 08:45

Date Received: 09/16/15 12:50

**Lab Sample ID: 580-53364-8**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	202098	09/30/15 15:28	D1R	TAL SEA
Total/NA	Prep	3520C			201261	09/19/15 14:58	JDR	TAL SEA
Total/NA	Analysis	8270C SIM		1	202430	10/04/15 01:50	AHP	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	201801	09/26/15 00:10	HDK	TAL SEA
Total/NA	Prep	3510C			201524	09/23/15 12:56	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		5	201839	09/28/15 18:13	KW	TAL SEA
Total/NA	Prep	1631E			198892	09/23/15 16:34	DSH	TAL CAN
Total/NA	Analysis	1631E		1	199370	09/25/15 15:54	DSH	TAL CAN
Total/NA	Prep	3010A			201911	09/28/15 13:00	PAB	TAL SEA
Total/NA	Analysis	6020		5	201970	09/28/15 23:35	FCW	TAL SEA

**Client Sample ID: U-24A-Cutoff-Phillips**

Date Collected: 09/16/15 08:20

Date Received: 09/16/15 12:50

**Lab Sample ID: 580-53364-9**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	202098	09/30/15 15:55	D1R	TAL SEA
Total/NA	Prep	3520C			201261	09/19/15 14:58	JDR	TAL SEA
Total/NA	Analysis	8270C SIM		1	202430	10/04/15 02:13	AHP	TAL SEA
Total/NA	Prep	3520C	DL		201261	09/19/15 14:58	JDR	TAL SEA
Total/NA	Analysis	8270C SIM	DL	10	204170	10/24/15 12:50	ERZ	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	201801	09/26/15 01:15	HDK	TAL SEA
Total/NA	Prep	3510C			201524	09/23/15 12:56	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		5	201839	09/28/15 18:49	KW	TAL SEA
Total/NA	Prep	1631E			198892	09/23/15 16:34	DSH	TAL CAN
Total/NA	Analysis	1631E		2	199370	09/25/15 15:58	DSH	TAL CAN
Total/NA	Prep	3010A			201911	09/28/15 13:00	PAB	TAL SEA

TestAmerica Seattle

## Lab Chronicle

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53364-1

SDG: 354972

**Client Sample ID: U-24A-Cutoff-Phillips**

**Lab Sample ID: 580-53364-9**

**Matrix: Water**

**Date Collected: 09/16/15 08:20**

**Date Received: 09/16/15 12:50**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	6020		5	201970	09/28/15 22:36	FCW	TAL SEA

**Laboratory References:**

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

## Certification Summary

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53364-1

SDG: 354972

### Laboratory: TestAmerica Seattle

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-022	03-02-16
California	State Program	9	2901	01-31-17
L-A-B	DoD ELAP		L2236	01-19-16
L-A-B	ISO/IEC 17025		L2236	01-19-16
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-06-16
US Fish & Wildlife	Federal		LE058448-0	02-28-16
USDA	Federal		P330-14-00126	04-08-17
Washington	State Program	10	C553	02-17-16

### Laboratory: TestAmerica Canton

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	NELAP	9	01144CA	06-30-14 *
California	State Program	9	2927	04-30-17
Connecticut	State Program	1	PH-0590	12-31-15
Illinois	NELAP	5	200004	07-31-16
Kansas	NELAP	7	E-10336	01-31-16 *
Kentucky (UST)	State Program	4	58	02-26-16
Kentucky (WW)	State Program	4	98016	12-31-15
L-A-B	DoD ELAP		L2315	07-18-16
Minnesota	NELAP	5	039-999-348	12-31-15
Nevada	State Program	9	OH-000482008A	07-31-16
New Jersey	NELAP	2	OH001	11-30-15 *
New York	NELAP	2	10975	03-31-16
Ohio VAP	State Program	5	CL0024	10-31-15 *
Oregon	NELAP	10	4062	02-23-16
Pennsylvania	NELAP	3	68-00340	08-31-16
Texas	NELAP	6	T104704517-15-5	08-31-16
USDA	Federal		P330-13-00319	11-26-16
Virginia	NELAP	3	460175	09-14-16
Washington	State Program	10	C971	01-12-16
West Virginia DEP	State Program	3	210	12-31-15
Wisconsin	State Program	5	999518190	08-31-16

\* Certification renewal pending - certification considered valid.

## Sample Summary

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0046601.0012.0042

TestAmerica Job ID: 580-53364-1

SDG: 354972

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-53364-1	Trip Blanks	Water	09/15/15 00:00	09/16/15 12:50
580-53364-2	U-22B-Cutoff-Phillips	Water	09/15/15 13:00	09/16/15 12:50
580-53364-3	BD-Cutoff-Phillips-1	Water	09/15/15 00:00	09/16/15 12:50
580-53364-4	U-22A-Cutoff-Phillips	Water	09/15/15 12:30	09/16/15 12:50
580-53364-5	U-23-Cutoff-Phillips	Water	09/15/15 14:00	09/16/15 12:50
580-53364-6	U-26-Cutoff-Phillips	Water	09/16/15 10:00	09/16/15 12:50
580-53364-7	U-25-Cutoff-Phillips	Water	09/16/15 09:30	09/16/15 12:50
580-53364-8	U-24B-Cutoff-Phillips	Water	09/16/15 08:45	09/16/15 12:50
580-53364-9	U-24A-Cutoff-Phillips	Water	09/16/15 08:20	09/16/15 12:50

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TestAmerica Seattle

TestAmerica Portland

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Beaverton, OR 97008  
Phone: 503.906.9200 Fax:

## ain of Custo



**Regulatory Program:**  DW  NPDES  RCRA **580-53364 Chain of Custody**

Tec\_America

THE LEADER IN ENVIRONMENTAL TESTING  
**TestAmerica Laboratories, Inc.**

TAL-8210 (0713)

Client Contact		Project Manager: <u>JENNIE FENLEY</u>		Site Contact: <u>SARAH MURRAY</u>		COC No: _____ of _____ COCs							
Company Name: <u>ARCADIS</u> Address: <u>111 SW COLUMBIA ST #690</u> City/State/Zip: <u>PORTLAND OR 97201</u> Phone: <u>503.220.8201 x</u> Fax:		Tel/Fax: <u>503.220.8201 x 1114</u> Analysis Turnaround Time <input type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS TAT if different from Below <input checked="" type="checkbox"/> 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day		Lab Contact: <u>SARAH MURRAY</u> Carrier: _____		Sampler: For Lab Use Only: Walk-in Client: _____ Lab Sampling: _____ Job / SDG No.: _____							
Project Name: <u>3Q 2015 WILSBIDGE GWM</u> Site: <u>354972</u> P O # <u>B00454 B0046601</u>													
Sample Identification		Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.	Filtered Sample Y/N	Perform MS / MSD (Y/N)	Sample Y/N	Total metals	Dissolved metals	Mercury (low level)	Sample Specific Notes:
Trip blanks		—	—	—	W	3	X	X					
U-22B-cutoff - phillips		9/15/15	13:00	G	W	12	X	X	X	X	X		
BD - cutoff - phillips - 1		9/15/15	—	G	W	12	X	X	X	X	X		
U-22A - cutoff - phillips		9/15/15	12:30	G	W	12	X	X	X	X	X		
U-23 - cutoff - phillips		9/15/15	14:00	G	W	12	X	X	X	X	X		
U-25 - cutoff - phillips		9/16/15	10:00	G	W	12	X	X	X	X	X		
U-25 - cutoff - phillips		9/16/15	09:30	G	W	12	X	X	X	X	X		
U-24B - cutoff - phillips		9/16/15	08:45	G	W	12	X	X	X	X	X		
U-24A - cutoff - phillips		9/16/15	08:10	G	W	12	X	X	X	X	X		
<b>Preservation Used:</b> 1=Ice 2=HCl 3=H <sub>2</sub> SO <sub>4</sub> 4=HNO <sub>3</sub> 5=NaOH 6=Other													
<b>Possible Hazard Identification:</b> Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.													
<input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown							Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return to Client <input checked="" type="checkbox"/> Disposal by Lab <input type="checkbox"/> Archive for _____ Months						
<b>Special Instructions/QC Requirements &amp; Comments:</b> * including BCR & Zn + Cu * including 2-Methoxyphenolene													
BRIAN.FENLEY@ARCADIS-US.COM AND BRIAN.MURRAY@ARCADIS-US.COM							Cooler Temp. (°C): Obs'd: _____ Corr'd: _____ Therm ID No.: _____						
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:											
Relinquished by: <u>M. E. Stanton</u> <u>OR</u> <u>Genie M. W.</u>		Company: <u>ARCADIS</u>		Date/Time: <u>9/16/15 12:15</u>		Received by: <u>Genie M. W.</u>		Company: <u>M. E.</u>		Date/Time: <u>9/16/15 1225</u>			
Relinquished by: <u>Genie M. W.</u>		Company: <u>M. E.</u>		Date/Time: <u>9/16/15 @ 1250</u>		Received by: <u>Genie M. W.</u>		Company: <u>TH</u>		Date/Time: <u>9/16/15 @ 1250</u>			
Relinquished by: <u>Genie M. W.</u>		Company: <u>TH</u>		Date/Time: <u>9/16/15 @ 1200</u>		Received by: <u>Genie M. W.</u>		Company: <u>TH Sea</u>		Date/Time: <u>9/18/15 9:30</u>			

208/C19.3

## Chain of Custody Record



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

<b>Client Information (Sub Contract Lab)</b>		Sampler:	Lab PM: Murphy, Sarah A	Carrier Tracking No(s):	COC No: 580-30334.1		
Client Contact: Shipping/Receiving		Phone:	E-Mail: sarah.murphy@testamericainc.com		Page: Page 1 of 1		
Company: TestAmerica Laboratories, Inc.					Job #: 580-53364-1		
Address: 4101 Shuffel Street NW,		Due Date Requested: 9/28/2015	Analysis Requested				
City: North Canton		TAT Requested (days):					
State, Zip: OH, 44720							
Phone: 330-497-9396(Tel) 330-497-0772(Fax)		PO #:					
Email:		WO #:					
Project Name: 3Q2015 Willbridge GWM B0046601.0012.0042		Project #: 58008238					
Site:		SSOW#:					
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, Q=waste/oil, BT=tissue, A=Air)		
				Preservation Code	Field Fill Date Sample Received Date		
					18/09/15 E_Pres		
U-22B-Cutoff-Phillips (580-53364-2)		9/15/15	13:00 Pacific	Water	X	2	
BD-Cutoff-Phillips-1 (580-53364-3)		9/15/15	Pacific	Water	X	2	
U-22A-Cutoff-Phillips (580-53364-4)		9/15/15	12:30 Pacific	Water	X	2	
U-23-Cutoff-Phillips (580-53364-5)		9/15/15	14:00 Pacific	Water	X	2	
U-26-Cutoff-Phillips (580-53364-6)		9/16/15	10:00 Pacific	Water	X	2	
U-25-Cutoff-Phillips (580-53364-7)		9/16/15	09:30 Pacific	Water	X	2	
U-24B-Cutoff-Phillips (580-53364-8)		9/16/15	08:45 Pacific	Water	X	2	
U-24A-Cutoff-Phillips (580-53364-9)		9/16/15	08:20 Pacific	Water	X	2	
Possible Hazard Identification		Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months					
Unconfirmed		Special Instructions/QC Requirements:					
Deliverable Requested: I, II, III, IV, Other (specify)							
Empty Kit Relinquished by:		Date:	Time:	Method of Shipment:			
Relinquished by:		Date/Time: 9/17/15 @ 1500	Company: TAA	Received by: Sarah Murphy	Date/Time: 9/18/15 915	Company: TAA	
Relinquished by:		Date/Time:	Company:	Received by:	Date/Time:	Company:	
Relinquished by:		Date/Time:	Company:	Received by:	Date/Time:	Company:	
Custody Seals Intact: △ Yes △ No		Custody Seal No.: 10 6 8 7 9 5 4 0 2					
		Cooler Temperature(s) °C and Other Remarks:					

TestAmerica Canton Sample Receipt Form/Narrative  
Canton Facility

Login #:

Client <u>TA Seash</u>	Site Name _____	Cooler unpacked by: <u>Lynn</u>
Cooler Received on <u>9/18/15</u>	Opened on <u>9/18/15</u>	
FedEx: 1 <sup>st</sup> Grd <input checked="" type="checkbox"/> Exp <input type="checkbox"/> UPS <input type="checkbox"/> FAS <input type="checkbox"/> Stetson	Client Drop Off <input type="checkbox"/> TestAmerica Courier <input type="checkbox"/> Other	
Receipt After-hours: Drop-off Date/Time		Storage Location _____
TestAmerica Cooler # _____	Foam Box <input type="checkbox"/> Client Cooler <input checked="" type="checkbox"/> Box <input type="checkbox"/> Other _____	
Packing material used: <u>Bubble Wrap</u> <input type="checkbox"/> Foam <input type="checkbox"/> Plastic Bag <input type="checkbox"/> None <input type="checkbox"/> Other _____		

COOLANT: Wet Ice  Blue Ice  Dry Ice  Water  None

1. Cooler temperature upon receipt  
 IR GUN# A (CF +1.0 °C) Observed Cooler Temp. \_\_\_\_\_ °C Corrected Cooler Temp. \_\_\_\_\_ °C  
 IR GUN# 4 (CF +0.5 °C) Observed Cooler Temp. \_\_\_\_\_ °C Corrected Cooler Temp. \_\_\_\_\_ °C  See Multiple Cooler Form  
 IR GUN# 5 (CF +0.4 °C) Observed Cooler Temp. \_\_\_\_\_ °C Corrected Cooler Temp. \_\_\_\_\_ °C  
 IR GUN# 8 (CF -1.5 °C) Observed Cooler Temp. 20.8 °C Corrected Cooler Temp. 19.3 °C
2. Were custody seals on the outside of the cooler(s)? If Yes Quantity \_\_\_\_\_  
 -Were custody seals on the outside of the cooler(s) signed & dated?  Yes  No NA  
 -Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?  Yes  No
3. Shippers' packing slip attached to the cooler(s)?  Yes  No
4. Did custody papers accompany the sample(s)?  Yes  No
5. Were the custody papers relinquished & signed in the appropriate place?  Yes  No
6. Was/were the person(s) who collected the samples clearly identified on the COC?  Yes  No
7. Did all bottles arrive in good condition (Unbroken)?  Yes  No
8. Could all bottle labels be reconciled with the COC?  Yes  No
9. Were correct bottle(s) used for the test(s) indicated?  Yes  No
10. Sufficient quantity received to perform indicated analyses?  Yes  No
11. Were sample(s) at the correct pH upon receipt?  Yes  No NA pH Strip Lot# HC554612
12. Were VOAs on the COC?  Yes  No
13. Were air bubbles >6 mm in any VOA vials?  Yes  No NA
14. Was a trip blank present in the cooler(s)? Trip Blank Lot# \_\_\_\_\_  Yes  No

Contacted PM \_\_\_\_\_ Date \_\_\_\_\_ by \_\_\_\_\_ via Verbal Voice Mail Other  
Concerning \_\_\_\_\_

## 14. CHAIN OF CUSTODY &amp; SAMPLE DISCREPANCIES

Samples processed by: \_\_\_\_\_

## 15. SAMPLE CONDITION

Sample(s) \_\_\_\_\_ were received after the recommended holding time had expired.

Sample(s) \_\_\_\_\_ were received in a broken container.

Sample(s) \_\_\_\_\_ were received with bubble &gt;6 mm in diameter. (Notify PM)

## 16. SAMPLE PRESERVATION

Sample(s) \_\_\_\_\_ were further preserved in the laboratory.

Time preserved: \_\_\_\_\_ Preservative(s) added/Lot number(s): \_\_\_\_\_

## Login Sample Receipt Checklist

Client: ARCADIS U.S. Inc

Job Number: 580-53364-1

SDG Number: 354972

**Login Number: 53364**

**List Source: TestAmerica Seattle**

**List Number: 1**

**Creator: Lehman, Clarissa A**

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	False	No name.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

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# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Seattle  
5755 8th Street East  
Tacoma, WA 98424  
Tel: (253)922-2310

TestAmerica Job ID: 580-53397-1  
TestAmerica Sample Delivery Group: 354972  
Client Project/Site: 3Q2015 Willbridge GWM  
B0045452.0018.0042

For:

ARCADIS U.S. Inc  
111 SW Columbia Street  
Suite 670  
Portland, Oregon 97201

Attn: Brian Marcum

Authorized for release by:

11/5/2015 5:03:21 PM

Sarah Murphy, Project Manager I  
(253)922-2310  
[sarah.murphy@testamericainc.com](mailto:sarah.murphy@testamericainc.com)

### LINKS

**Review your project results through**

**TotalAccess**

**Have a Question?**

**Ask The Expert**

**Visit us at:**

[www.testamericainc.com](http://www.testamericainc.com)

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*

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# Case Narrative

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53397-1

SDG: 354972

## Job ID: 580-53397-1

### Laboratory: TestAmerica Seattle

#### Narrative

#### Job Narrative 580-53397-1

#### Receipt

The samples were received on 9/17/2015 2:00 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 4 coolers at receipt time were 0.9° C, 1.4° C, 2.8° C and 4.4° C.

#### Receipt Exceptions

The 580-53397-J-6 HCL Voa Vial for the following sample Trip Blanks (580-53397-1), BD-RI-Phillips-2 (580-53397-2), B-35-RI-Phillips (580-53397-3), B-40-RI-Phillips (580-53397-4), B-36-RI-Phillips (580-53397-5), EB-RI-Phillips-1 (580-53397-6) and EB-RI-Phillips-2 (580-53397-7) was received at Seattleempty.

#### GC/MS VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### GC/MS Semi VOA

Method(s) 8270C SIM: The following samples were diluted due to the nature of the sample matrix: BD-RI-Phillips-2 (580-53397-2), B-35-RI-Phillips (580-53397-3), B-40-RI-Phillips (580-53397-4) and B-36-RI-Phillips (580-53397-5) at 10.0, 10.0, 100.0 and 10.0. Elevated reporting limits (RLs) are provided.

Method(s) 8270C SIM: The following analyte(s) recovered outside control limits for the LCS/LCSD associated with preparation batch 580-201556 and analytical batch 580-202733: Acenaphthylene, Anthracene and Benzo[a]pyrene. These analytes were outside the Marginal Exceedance Limits and were indicative of a systematic problem; However, due to the re-extraction event being past double the holding time, the re-extraction would not have been feasible. The data is qualified and reported.

Method(s) 8270C SIM: The %RPD of the laboratory control sample (LCS) and laboratory control standard duplicate (LCSD) for preparation batch 580-201556 recovered outside control limits for the following analytes: Benzo[a]pyrene.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### GC Semi VOA

Method(s) NWTPH-Dx: The following samples required a dilution due to the nature of the sample matrix: BD-RI-Phillips-2 (580-53397-2), B-35-RI-Phillips (580-53397-3), B-40-RI-Phillips (580-53397-4) and B-36-RI-Phillips (580-53397-5). Because of this dilution, the surrogate spike concentration in the sample was reduced to a level where the recovery calculation does not provide useful information.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Definitions/Glossary

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53397-1

SDG: 354972

## Qualifiers

### GC/MS Semi VOA

Qualifier	Qualifier Description
*	LCS or LCSD is outside acceptance limits.
*	RPD of the LCS and LCSD exceeds the control limits

### GC Semi VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits

## Glossary

### Abbreviation

**These commonly used abbreviations may or may not be present in this report.**

□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

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# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53397-1

SDG: 354972

## Client Sample ID: Trip Blanks

Date Collected: 09/17/15 00:00

Date Received: 09/17/15 14:00

## Lab Sample ID: 580-53397-1

Matrix: Water

### Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050		mg/L			09/24/15 19:52	1
<b>Surrogate</b>									
	%Recovery	Qualifier		Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	91			50 - 150				09/24/15 19:52	1
Trifluorotoluene (Surr)	110			50 - 150				09/24/15 19:52	1

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53397-1

SDG: 354972

**Client Sample ID: BD-RI-Phillips-2**

Date Collected: 09/17/15 00:00

Date Received: 09/17/15 14:00

**Lab Sample ID: 580-53397-2**

Matrix: Water

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			09/30/15 20:06	1
Ethylbenzene	ND		3.0		ug/L			09/30/15 20:06	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/30/15 20:06	1
<b>m-Xylene &amp; p-Xylene</b>	<b>3.0</b>		3.0		ug/L			09/30/15 20:06	1
<b>o-Xylene</b>	<b>3.8</b>		2.0		ug/L			09/30/15 20:06	1
Toluene	3.4		2.0		ug/L			09/30/15 20:06	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	111			75 - 120				09/30/15 20:06	1
Dibromofluoromethane (Surr)	102			85 - 115				09/30/15 20:06	1
1,2-Dichloroethane-d4 (Surr)	112			70 - 120				09/30/15 20:06	1
Toluene-d8 (Surr)	96			85 - 120				09/30/15 20:06	1
Trifluorotoluene (Surr)	110			70 - 136				09/30/15 20:06	1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Naphthalene</b>	<b>0.53</b>		0.095		ug/L		09/23/15 15:58	10/08/15 14:11	10
2-Methylnaphthalene	ND		0.12		ug/L		09/23/15 15:58	10/08/15 14:11	10
1-Methylnaphthalene	ND		0.095		ug/L		09/23/15 15:58	10/08/15 14:11	10
<b>Acenaphthylene</b>	<b>0.55 *</b>		0.095		ug/L		09/23/15 15:58	10/08/15 14:11	10
<b>Acenaphthene</b>	<b>2.8</b>		0.095		ug/L		09/23/15 15:58	10/08/15 14:11	10
<b>Fluorene</b>	<b>8.4</b>		0.095		ug/L		09/23/15 15:58	10/08/15 14:11	10
<b>Phenanthrene</b>	<b>8.9</b>		0.95		ug/L		09/23/15 15:58	10/08/15 14:11	10
<b>Anthracene</b>	<b>0.38 *</b>		0.24		ug/L		09/23/15 15:58	10/08/15 14:11	10
<b>Fluoranthene</b>	<b>1.5</b>		0.48		ug/L		09/23/15 15:58	10/08/15 14:11	10
<b>Pyrene</b>	<b>1.1</b>		0.48		ug/L		09/23/15 15:58	10/08/15 14:11	10
<b>Benzo[a]anthracene</b>	<b>0.24</b>		0.095		ug/L		09/23/15 15:58	10/08/15 14:11	10
<b>Chrysene</b>	<b>0.22</b>		0.095		ug/L		09/23/15 15:58	10/08/15 14:11	10
Benzo[a]pyrene	ND *		0.095		ug/L		09/23/15 15:58	10/08/15 14:11	10
Indeno[1,2,3-cd]pyrene	ND		0.095		ug/L		09/23/15 15:58	10/08/15 14:11	10
Dibenz(a,h)anthracene	ND		0.095		ug/L		09/23/15 15:58	10/08/15 14:11	10
Benzo[g,h,i]perylene	ND		0.095		ug/L		09/23/15 15:58	10/08/15 14:11	10
<b>Benzo[b]fluoranthene</b>	<b>0.11</b>		0.095		ug/L		09/23/15 15:58	10/08/15 14:11	10
Benzo[k]fluoranthene	ND		0.095		ug/L		09/23/15 15:58	10/08/15 14:11	10
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Terphenyl-d14	113			64 - 150			09/23/15 15:58	10/08/15 14:11	10

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Gasoline</b>	<b>1.1</b>		0.050		mg/L			09/26/15 08:26	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	124			50 - 150				09/26/15 08:26	1
Trifluorotoluene (Surr)	106			50 - 150				09/26/15 08:26	1

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	9.6		0.57		mg/L		09/23/15 12:56	09/28/15 19:07	5
Motor Oil (>C24-C36)	1.5		1.3		mg/L		09/23/15 12:56	09/28/15 19:07	5

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53397-1

SDG: 354972

**Client Sample ID: BD-RI-Phillips-2**

Date Collected: 09/17/15 00:00

Date Received: 09/17/15 14:00

**Lab Sample ID: 580-53397-2**

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o-Terphenyl</i>	164	X	50 - 150	09/23/15 12:56	09/28/15 19:07	5

**Method: 1631E - Mercury, Low Level (CVAFS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	4.0		0.50		ng/L	D	09/24/15 16:15	09/25/15 08:57	1

**Method: 6020 - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.044		0.0050		mg/L	D	09/28/15 13:59	09/29/15 01:48	5
Barium	0.12		0.0060		mg/L	D	09/28/15 13:59	09/29/15 01:48	5
Cadmium	ND		0.0020		mg/L	D	09/28/15 13:59	09/29/15 01:48	5
Chromium	0.0079		0.0020		mg/L	D	09/28/15 13:59	09/29/15 01:48	5
Copper	ND		0.010		mg/L	D	09/28/15 13:59	09/29/15 01:48	5
Lead	0.0062		0.0020		mg/L	D	09/28/15 13:59	09/29/15 01:48	5
Manganese	3.3		0.010		mg/L	D	09/28/15 13:59	09/29/15 01:48	5
Selenium	ND		0.0050		mg/L	D	09/28/15 13:59	09/29/15 01:48	5
Silver	ND		0.0020		mg/L	D	09/28/15 13:59	09/29/15 01:48	5
Zinc	ND		0.035		mg/L	D	09/28/15 13:59	09/29/15 01:48	5

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53397-1

SDG: 354972

**Client Sample ID: B-35-RI-Phillips**

Date Collected: 09/17/15 10:00

Date Received: 09/17/15 14:00

**Lab Sample ID: 580-53397-3**

Matrix: Water

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			09/30/15 20:46	1
Ethylbenzene	ND		3.0		ug/L			09/30/15 20:46	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/30/15 20:46	1
<b>m-Xylene &amp; p-Xylene</b>	<b>3.8</b>		3.0		ug/L			09/30/15 20:46	1
<b>o-Xylene</b>	<b>5.6</b>		2.0		ug/L			09/30/15 20:46	1
Toluene	4.3		2.0		ug/L			09/30/15 20:46	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	109			75 - 120				09/30/15 20:46	1
Dibromofluoromethane (Surr)	103			85 - 115				09/30/15 20:46	1
1,2-Dichloroethane-d4 (Surr)	113			70 - 120				09/30/15 20:46	1
Toluene-d8 (Surr)	97			85 - 120				09/30/15 20:46	1
Trifluorotoluene (Surr)	109			70 - 136				09/30/15 20:46	1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Naphthalene</b>	<b>0.61</b>		0.095		ug/L		09/23/15 15:58	10/08/15 14:34	10
2-Methylnaphthalene	ND		0.12		ug/L		09/23/15 15:58	10/08/15 14:34	10
<b>1-Methylnaphthalene</b>	<b>0.75</b>		0.095		ug/L		09/23/15 15:58	10/08/15 14:34	10
<b>Acenaphthylene</b>	<b>0.45 *</b>		0.095		ug/L		09/23/15 15:58	10/08/15 14:34	10
<b>Acenaphthene</b>	<b>2.3</b>		0.095		ug/L		09/23/15 15:58	10/08/15 14:34	10
<b>Fluorene</b>	<b>7.0</b>		0.095		ug/L		09/23/15 15:58	10/08/15 14:34	10
<b>Phenanthrene</b>	<b>10</b>		0.95		ug/L		09/23/15 15:58	10/08/15 14:34	10
<b>Anthracene</b>	<b>0.35 *</b>		0.24		ug/L		09/23/15 15:58	10/08/15 14:34	10
<b>Fluoranthene</b>	<b>1.7</b>		0.47		ug/L		09/23/15 15:58	10/08/15 14:34	10
<b>Pyrene</b>	<b>1.2</b>		0.47		ug/L		09/23/15 15:58	10/08/15 14:34	10
<b>Benzo[a]anthracene</b>	<b>0.25</b>		0.095		ug/L		09/23/15 15:58	10/08/15 14:34	10
<b>Chrysene</b>	<b>0.25</b>		0.095		ug/L		09/23/15 15:58	10/08/15 14:34	10
Benzo[a]pyrene	ND *		0.095		ug/L		09/23/15 15:58	10/08/15 14:34	10
Indeno[1,2,3-cd]pyrene	ND		0.095		ug/L		09/23/15 15:58	10/08/15 14:34	10
Dibenz(a,h)anthracene	ND		0.095		ug/L		09/23/15 15:58	10/08/15 14:34	10
Benzo[g,h,i]perylene	ND		0.095		ug/L		09/23/15 15:58	10/08/15 14:34	10
<b>Benzo[b]fluoranthene</b>	<b>0.13</b>		0.095		ug/L		09/23/15 15:58	10/08/15 14:34	10
Benzo[k]fluoranthene	ND		0.095		ug/L		09/23/15 15:58	10/08/15 14:34	10
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Terphenyl-d14	98			64 - 150			09/23/15 15:58	10/08/15 14:34	10

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Gasoline</b>	<b>1.5</b>		0.050		mg/L			09/26/15 09:00	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	137			50 - 150				09/26/15 09:00	1
Trifluorotoluene (Surr)	110			50 - 150				09/26/15 09:00	1

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	6.8		0.62		mg/L		09/23/15 12:56	09/28/15 19:25	5
Motor Oil (>C24-C36)	ND		1.4		mg/L		09/23/15 12:56	09/28/15 19:25	5

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53397-1

SDG: 354972

**Client Sample ID: B-35-RI-Phillips**

Date Collected: 09/17/15 10:00

Date Received: 09/17/15 14:00

**Lab Sample ID: 580-53397-3**

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o-Terphenyl</i>	130		50 - 150	09/23/15 12:56	09/28/15 19:25	5

**Method: 1631E - Mercury, Low Level (CVAFS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.50		ng/L	D	09/24/15 16:15	09/25/15 09:01	1

**Method: 6020 - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Arsenic</b>	<b>0.098</b>		0.0050		mg/L		09/28/15 13:59	09/29/15 01:53	5
<b>Barium</b>	<b>0.18</b>		0.0060		mg/L		09/28/15 13:59	09/29/15 01:53	5
Cadmium	ND		0.0020		mg/L		09/28/15 13:59	09/29/15 01:53	5
<b>Chromium</b>	<b>0.0036</b>		0.0020		mg/L		09/28/15 13:59	09/29/15 01:53	5
Copper	ND		0.010		mg/L		09/28/15 13:59	09/29/15 01:53	5
<b>Lead</b>	<b>0.0031</b>		0.0020		mg/L		09/28/15 13:59	09/29/15 01:53	5
<b>Manganese</b>	<b>4.1</b>		0.010		mg/L		09/28/15 13:59	09/29/15 01:53	5
Selenium	ND		0.0050		mg/L		09/28/15 13:59	09/29/15 01:53	5
Silver	ND		0.0020		mg/L		09/28/15 13:59	09/29/15 01:53	5
Zinc	ND		0.035		mg/L		09/28/15 13:59	09/29/15 01:53	5

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53397-1

SDG: 354972

**Client Sample ID: B-40-RI-Phillips**

Date Collected: 09/17/15 09:15

Date Received: 09/17/15 14:00

**Lab Sample ID: 580-53397-4**

Matrix: Water

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			09/30/15 21:13	1
Ethylbenzene	5.7		3.0		ug/L			09/30/15 21:13	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/30/15 21:13	1
m-Xylene & p-Xylene	9.8		3.0		ug/L			09/30/15 21:13	1
o-Xylene	ND		2.0		ug/L			09/30/15 21:13	1
Toluene	ND		2.0		ug/L			09/30/15 21:13	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	110			75 - 120				09/30/15 21:13	1
Dibromofluoromethane (Surr)	101			85 - 115				09/30/15 21:13	1
1,2-Dichloroethane-d4 (Surr)	107			70 - 120				09/30/15 21:13	1
Toluene-d8 (Surr)	98			85 - 120				09/30/15 21:13	1
Trifluorotoluene (Surr)	106			70 - 136				09/30/15 21:13	1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	13		0.97		ug/L		09/23/15 15:58	10/08/15 14:57	100
2-Methylnaphthalene	94		1.3		ug/L		09/23/15 15:58	10/08/15 14:57	100
1-Methylnaphthalene	120		0.97		ug/L		09/23/15 15:58	10/08/15 14:57	100
Acenaphthylene	ND *		0.97		ug/L		09/23/15 15:58	10/08/15 14:57	100
Acenaphthene	6.1		0.97		ug/L		09/23/15 15:58	10/08/15 14:57	100
Fluorene	7.8		0.97		ug/L		09/23/15 15:58	10/08/15 14:57	100
Phenanthrene	12		9.7		ug/L		09/23/15 15:58	10/08/15 14:57	100
Anthracene	ND *		2.4		ug/L		09/23/15 15:58	10/08/15 14:57	100
Fluoranthene	ND		4.8		ug/L		09/23/15 15:58	10/08/15 14:57	100
Pyrene	ND		4.8		ug/L		09/23/15 15:58	10/08/15 14:57	100
Benzo[a]anthracene	ND		0.97		ug/L		09/23/15 15:58	10/08/15 14:57	100
Chrysene	ND		0.97		ug/L		09/23/15 15:58	10/08/15 14:57	100
Benzo[a]pyrene	ND *		0.97		ug/L		09/23/15 15:58	10/08/15 14:57	100
Indeno[1,2,3-cd]pyrene	ND		0.97		ug/L		09/23/15 15:58	10/08/15 14:57	100
Dibenz(a,h)anthracene	ND		0.97		ug/L		09/23/15 15:58	10/08/15 14:57	100
Benzo[g,h,i]perylene	ND		0.97		ug/L		09/23/15 15:58	10/08/15 14:57	100
Benzo[b]fluoranthene	ND		0.97		ug/L		09/23/15 15:58	10/08/15 14:57	100
Benzo[k]fluoranthene	ND		0.97		ug/L		09/23/15 15:58	10/08/15 14:57	100
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Terphenyl-d14	113			64 - 150				09/23/15 15:58	10/08/15 14:57

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	3.2		0.050		mg/L			09/26/15 09:33	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	103			50 - 150				09/26/15 09:33	1
Trifluorotoluene (Surr)	101			50 - 150				09/26/15 09:33	1

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	16		0.57		mg/L		09/23/15 12:56	09/28/15 19:43	5
Motor Oil (>C24-C36)	3.9		1.3		mg/L		09/23/15 12:56	09/28/15 19:43	5

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53397-1

SDG: 354972

**Client Sample ID: B-40-RI-Phillips**

Date Collected: 09/17/15 09:15

Date Received: 09/17/15 14:00

**Lab Sample ID: 580-53397-4**

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o-Terphenyl</i>	155	X	50 - 150	09/23/15 12:56	09/28/15 19:43	5

**Method: 1631E - Mercury, Low Level (CVAFS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.63		0.50		ng/L	D	09/24/15 16:15	09/25/15 09:04	1

**Method: 6020 - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.015		0.0050		mg/L	D	09/28/15 13:59	09/29/15 01:57	5
Barium	0.076		0.0060		mg/L	D	09/28/15 13:59	09/29/15 01:57	5
Cadmium	ND		0.0020		mg/L	D	09/28/15 13:59	09/29/15 01:57	5
Chromium	0.0042		0.0020		mg/L	D	09/28/15 13:59	09/29/15 01:57	5
Copper	ND		0.010		mg/L	D	09/28/15 13:59	09/29/15 01:57	5
Lead	ND		0.0020		mg/L	D	09/28/15 13:59	09/29/15 01:57	5
Manganese	2.6		0.010		mg/L	D	09/28/15 13:59	09/29/15 01:57	5
Selenium	ND		0.0050		mg/L	D	09/28/15 13:59	09/29/15 01:57	5
Silver	ND		0.0020		mg/L	D	09/28/15 13:59	09/29/15 01:57	5
Zinc	0.054		0.035		mg/L	D	09/28/15 13:59	09/29/15 01:57	5

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53397-1

SDG: 354972

**Client Sample ID: B-36-RI-Phillips**

Date Collected: 09/17/15 11:15

Date Received: 09/17/15 14:00

**Lab Sample ID: 580-53397-5**

Matrix: Water

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			09/30/15 21:39	1
Ethylbenzene	ND		3.0		ug/L			09/30/15 21:39	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/30/15 21:39	1
m-Xylene & p-Xylene	ND		3.0		ug/L			09/30/15 21:39	1
o-Xylene	ND		2.0		ug/L			09/30/15 21:39	1
Toluene	ND		2.0		ug/L			09/30/15 21:39	1
<b>Surrogate</b>		%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	112			75 - 120				09/30/15 21:39	1
Dibromofluoromethane (Surr)	102			85 - 115				09/30/15 21:39	1
1,2-Dichloroethane-d4 (Surr)	109			70 - 120				09/30/15 21:39	1
Toluene-d8 (Surr)	98			85 - 120				09/30/15 21:39	1
Trifluorotoluene (Surr)	107			70 - 136				09/30/15 21:39	1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	0.62		0.095		ug/L		09/23/15 15:58	10/08/15 15:20	10
2-Methylnaphthalene	ND		0.12		ug/L		09/23/15 15:58	10/08/15 15:20	10
1-Methylnaphthalene	1.6		0.095		ug/L		09/23/15 15:58	10/08/15 15:20	10
Acenaphthylene	0.14 *		0.095		ug/L		09/23/15 15:58	10/08/15 15:20	10
Acenaphthene	0.85		0.095		ug/L		09/23/15 15:58	10/08/15 15:20	10
Fluorene	2.6		0.095		ug/L		09/23/15 15:58	10/08/15 15:20	10
Phenanthrene	ND		0.95		ug/L		09/23/15 15:58	10/08/15 15:20	10
Anthracene	ND *		0.24		ug/L		09/23/15 15:58	10/08/15 15:20	10
Fluoranthene	ND		0.47		ug/L		09/23/15 15:58	10/08/15 15:20	10
Pyrene	ND		0.47		ug/L		09/23/15 15:58	10/08/15 15:20	10
Benzo[a]anthracene	ND		0.095		ug/L		09/23/15 15:58	10/08/15 15:20	10
Chrysene	ND		0.095		ug/L		09/23/15 15:58	10/08/15 15:20	10
Benzo[a]pyrene	ND *		0.095		ug/L		09/23/15 15:58	10/08/15 15:20	10
Indeno[1,2,3-cd]pyrene	ND		0.095		ug/L		09/23/15 15:58	10/08/15 15:20	10
Dibenz(a,h)anthracene	ND		0.095		ug/L		09/23/15 15:58	10/08/15 15:20	10
Benzo[g,h,i]perylene	ND		0.095		ug/L		09/23/15 15:58	10/08/15 15:20	10
Benzo[b]fluoranthene	ND		0.095		ug/L		09/23/15 15:58	10/08/15 15:20	10
Benzo[k]fluoranthene	ND		0.095		ug/L		09/23/15 15:58	10/08/15 15:20	10
<b>Surrogate</b>		%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Terphenyl-d14	137			64 - 150				09/23/15 15:58	10/08/15 15:20

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	0.36		0.050		mg/L			09/26/15 07:20	1
<b>Surrogate</b>		%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	102			50 - 150				09/26/15 07:20	1
Trifluorotoluene (Surr)	103			50 - 150				09/26/15 07:20	1

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	10		0.56		mg/L		09/23/15 12:56	09/28/15 20:01	5
Motor Oil (>C24-C36)	2.2		1.3		mg/L		09/23/15 12:56	09/28/15 20:01	5

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53397-1

SDG: 354972

**Client Sample ID: B-36-RI-Phillips**

Date Collected: 09/17/15 11:15

Date Received: 09/17/15 14:00

**Lab Sample ID: 580-53397-5**

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o-Terphenyl</i>	117		50 - 150	09/23/15 12:56	09/28/15 20:01	5

**Method: 1631E - Mercury, Low Level (CVAFS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	1.4		0.50		ng/L	D	09/24/15 16:15	09/25/15 09:08	1

**Method: 6020 - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.021		0.0050		mg/L	D	09/28/15 13:59	09/29/15 02:02	5
Barium	0.099		0.0060		mg/L	D	09/28/15 13:59	09/29/15 02:02	5
Cadmium	ND		0.0020		mg/L	D	09/28/15 13:59	09/29/15 02:02	5
Chromium	0.0024		0.0020		mg/L	D	09/28/15 13:59	09/29/15 02:02	5
Copper	ND		0.010		mg/L	D	09/28/15 13:59	09/29/15 02:02	5
Lead	0.0025		0.0020		mg/L	D	09/28/15 13:59	09/29/15 02:02	5
Manganese	4.3		0.010		mg/L	D	09/28/15 13:59	09/29/15 02:02	5
Selenium	ND		0.0050		mg/L	D	09/28/15 13:59	09/29/15 02:02	5
Silver	ND		0.0020		mg/L	D	09/28/15 13:59	09/29/15 02:02	5
Zinc	ND		0.035		mg/L	D	09/28/15 13:59	09/29/15 02:02	5

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53397-1

SDG: 354972

**Client Sample ID: EB-RI-Phillips-1**

Date Collected: 09/17/15 12:30

Date Received: 09/17/15 14:00

**Lab Sample ID: 580-53397-6**

Matrix: Water

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			09/30/15 22:07	1
Ethylbenzene	ND		3.0		ug/L			09/30/15 22:07	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/30/15 22:07	1
m-Xylene & p-Xylene	ND		3.0		ug/L			09/30/15 22:07	1
o-Xylene	ND		2.0		ug/L			09/30/15 22:07	1
Toluene	ND		2.0		ug/L			09/30/15 22:07	1
<b>Surrogate</b>		%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	112			75 - 120				09/30/15 22:07	1
Dibromofluoromethane (Surr)	104			85 - 115				09/30/15 22:07	1
1,2-Dichloroethane-d4 (Surr)	108			70 - 120				09/30/15 22:07	1
Toluene-d8 (Surr)	99			85 - 120				09/30/15 22:07	1
Trifluorotoluene (Surr)	104			70 - 136				09/30/15 22:07	1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.0096		ug/L		09/23/15 15:58	10/08/15 15:43	1
2-Methylnaphthalene	ND		0.012		ug/L		09/23/15 15:58	10/08/15 15:43	1
1-Methylnaphthalene	ND		0.0096		ug/L		09/23/15 15:58	10/08/15 15:43	1
Acenaphthylene	ND *		0.0096		ug/L		09/23/15 15:58	10/08/15 15:43	1
Acenaphthene	ND		0.0096		ug/L		09/23/15 15:58	10/08/15 15:43	1
Fluorene	ND		0.0096		ug/L		09/23/15 15:58	10/08/15 15:43	1
Phenanthrene	ND		0.096		ug/L		09/23/15 15:58	10/08/15 15:43	1
Anthracene	ND *		0.024		ug/L		09/23/15 15:58	10/08/15 15:43	1
Fluoranthene	ND		0.048		ug/L		09/23/15 15:58	10/08/15 15:43	1
Pyrene	ND		0.048		ug/L		09/23/15 15:58	10/08/15 15:43	1
Benzo[a]anthracene	ND		0.0096		ug/L		09/23/15 15:58	10/08/15 15:43	1
Chrysene	ND		0.0096		ug/L		09/23/15 15:58	10/08/15 15:43	1
Benzo[a]pyrene	ND *		0.0096		ug/L		09/23/15 15:58	10/08/15 15:43	1
Indeno[1,2,3-cd]pyrene	ND		0.0096		ug/L		09/23/15 15:58	10/08/15 15:43	1
Dibenz(a,h)anthracene	ND		0.0096		ug/L		09/23/15 15:58	10/08/15 15:43	1
Benzo[g,h,i]perylene	ND		0.0096		ug/L		09/23/15 15:58	10/08/15 15:43	1
Benzo[b]fluoranthene	ND		0.0096		ug/L		09/23/15 15:58	10/08/15 15:43	1
Benzo[k]fluoranthene	ND		0.0096		ug/L		09/23/15 15:58	10/08/15 15:43	1
<b>Surrogate</b>		%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Terphenyl-d14	119			64 - 150				09/23/15 15:58	10/08/15 15:43

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050		mg/L			09/26/15 06:47	1
<b>Surrogate</b>		%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	92			50 - 150				09/26/15 06:47	1
Trifluorotoluene (Surr)	102			50 - 150				09/26/15 06:47	1

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.58		mg/L		09/23/15 12:56	09/28/15 20:19	5
Motor Oil (>C24-C36)	ND		1.3		mg/L		09/23/15 12:56	09/28/15 20:19	5

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53397-1

SDG: 354972

**Client Sample ID: EB-RI-Phillips-1**

Date Collected: 09/17/15 12:30

Date Received: 09/17/15 14:00

**Lab Sample ID: 580-53397-6**

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o-Terphenyl</i>	94		50 - 150	09/23/15 12:56	09/28/15 20:19	5

**Method: 1631E - Mercury, Low Level (CVAFS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.50		ng/L	D	09/24/15 16:15	09/25/15 09:12	1

**Method: 6020 - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0050		mg/L	D	09/28/15 13:59	09/29/15 00:26	5
Barium	ND		0.0060		mg/L	D	09/28/15 13:59	09/29/15 00:26	5
Cadmium	ND		0.0020		mg/L	D	09/28/15 13:59	09/29/15 00:26	5
Chromium	ND		0.0020		mg/L	D	09/28/15 13:59	09/29/15 00:26	5
Copper	ND		0.010		mg/L	D	09/28/15 13:59	09/29/15 00:26	5
Lead	ND		0.0020		mg/L	D	09/28/15 13:59	09/29/15 00:26	5
Manganese	ND		0.010		mg/L	D	09/28/15 13:59	09/29/15 00:26	5
Selenium	ND		0.0050		mg/L	D	09/28/15 13:59	09/29/15 00:26	5
Silver	ND		0.0020		mg/L	D	09/28/15 13:59	09/29/15 00:26	5
Zinc	ND		0.035		mg/L	D	09/28/15 13:59	09/29/15 00:26	5

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53397-1

SDG: 354972

**Client Sample ID: EB-RI-Phillips-2**

**Lab Sample ID: 580-53397-7**

**Matrix: Water**

Date Collected: 09/17/15 13:30

Date Received: 09/17/15 14:00

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			09/30/15 22:34	1
Ethylbenzene	ND		3.0		ug/L			09/30/15 22:34	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/30/15 22:34	1
m-Xylene & p-Xylene	ND		3.0		ug/L			09/30/15 22:34	1
o-Xylene	ND		2.0		ug/L			09/30/15 22:34	1
Toluene	ND		2.0		ug/L			09/30/15 22:34	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	109			75 - 120				09/30/15 22:34	1
Dibromofluoromethane (Surr)	103			85 - 115				09/30/15 22:34	1
1,2-Dichloroethane-d4 (Surr)	109			70 - 120				09/30/15 22:34	1
Toluene-d8 (Surr)	96			85 - 120				09/30/15 22:34	1
Trifluorotoluene (Surr)	105			70 - 136				09/30/15 22:34	1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.0095		ug/L		09/23/15 15:58	10/08/15 16:06	1
2-Methylnaphthalene	ND		0.012		ug/L		09/23/15 15:58	10/08/15 16:06	1
1-Methylnaphthalene	ND		0.0095		ug/L		09/23/15 15:58	10/08/15 16:06	1
Acenaphthylene	ND *		0.0095		ug/L		09/23/15 15:58	10/08/15 16:06	1
Acenaphthene	ND		0.0095		ug/L		09/23/15 15:58	10/08/15 16:06	1
Fluorene	ND		0.0095		ug/L		09/23/15 15:58	10/08/15 16:06	1
Phenanthrene	ND		0.095		ug/L		09/23/15 15:58	10/08/15 16:06	1
Anthracene	ND *		0.024		ug/L		09/23/15 15:58	10/08/15 16:06	1
Fluoranthene	ND		0.048		ug/L		09/23/15 15:58	10/08/15 16:06	1
Pyrene	ND		0.048		ug/L		09/23/15 15:58	10/08/15 16:06	1
Benzo[a]anthracene	ND		0.0095		ug/L		09/23/15 15:58	10/08/15 16:06	1
Chrysene	ND		0.0095		ug/L		09/23/15 15:58	10/08/15 16:06	1
Benzo[a]pyrene	ND *		0.0095		ug/L		09/23/15 15:58	10/08/15 16:06	1
Indeno[1,2,3-cd]pyrene	ND		0.0095		ug/L		09/23/15 15:58	10/08/15 16:06	1
Dibenz(a,h)anthracene	ND		0.0095		ug/L		09/23/15 15:58	10/08/15 16:06	1
Benzo[g,h,i]perylene	ND		0.0095		ug/L		09/23/15 15:58	10/08/15 16:06	1
Benzo[b]fluoranthene	ND		0.0095		ug/L		09/23/15 15:58	10/08/15 16:06	1
Benzo[k]fluoranthene	ND		0.0095		ug/L		09/23/15 15:58	10/08/15 16:06	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Terphenyl-d14	116			64 - 150				09/23/15 15:58	10/08/15 16:06

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050		mg/L			09/26/15 07:54	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	92			50 - 150				09/26/15 07:54	1
Trifluorotoluene (Surr)	103			50 - 150				09/26/15 07:54	1

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.62		mg/L		09/23/15 12:56	09/28/15 20:38	5
Motor Oil (>C24-C36)	ND		1.4		mg/L		09/23/15 12:56	09/28/15 20:38	5

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53397-1

SDG: 354972

**Client Sample ID: EB-RI-Phillips-2**

Date Collected: 09/17/15 13:30

Date Received: 09/17/15 14:00

**Lab Sample ID: 580-53397-7**

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o-Terphenyl</i>	93		50 - 150	09/23/15 12:56	09/28/15 20:38	5

**Method: 1631E - Mercury, Low Level (CVAFS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.50		ng/L	D	09/24/15 16:15	09/25/15 16:01	1

**Method: 6020 - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0050		mg/L	D	09/28/15 13:59	09/29/15 00:30	5
Barium	ND		0.0060		mg/L	D	09/28/15 13:59	09/29/15 00:30	5
Cadmium	ND		0.0020		mg/L	D	09/28/15 13:59	09/29/15 00:30	5
Chromium	ND		0.0020		mg/L	D	09/28/15 13:59	09/29/15 00:30	5
Copper	ND		0.010		mg/L	D	09/28/15 13:59	09/29/15 00:30	5
Lead	ND		0.0020		mg/L	D	09/28/15 13:59	09/29/15 00:30	5
Manganese	ND		0.010		mg/L	D	09/28/15 13:59	09/29/15 00:30	5
Selenium	ND		0.0050		mg/L	D	09/28/15 13:59	09/29/15 00:30	5
Silver	ND		0.0020		mg/L	D	09/28/15 13:59	09/29/15 00:30	5
Zinc	ND		0.035		mg/L	D	09/28/15 13:59	09/29/15 00:30	5

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53397-1

SDG: 354972

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 580-202129/4**

**Matrix: Water**

**Analysis Batch: 202129**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Benzene	ND		2.0		ug/L			09/30/15 14:17	1
Ethylbenzene	ND		3.0		ug/L			09/30/15 14:17	1
Methyl tert-butyl ether	ND		1.0		ug/L			09/30/15 14:17	1
m-Xylene & p-Xylene	ND		3.0		ug/L			09/30/15 14:17	1
o-Xylene	ND		2.0		ug/L			09/30/15 14:17	1
Toluene	ND		2.0		ug/L			09/30/15 14:17	1

Surrogate	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	108		75 - 120		09/30/15 14:17	1
Dibromofluoromethane (Surr)	104		85 - 115		09/30/15 14:17	1
1,2-Dichloroethane-d4 (Surr)	112		70 - 120		09/30/15 14:17	1
Toluene-d8 (Surr)	97		85 - 120		09/30/15 14:17	1
Trifluorotoluene (Surr)	108		70 - 136		09/30/15 14:17	1

**Lab Sample ID: LCS 580-202129/5**

**Matrix: Water**

**Analysis Batch: 202129**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike	LCS	LCS	D	%Rec	%Rec.	Limits
	Added	Result	Qualifier				
Benzene	20.1	18.9		ug/L	94	80 - 120	
Ethylbenzene	20.1	19.0		ug/L	95	75 - 125	
Methyl tert-butyl ether	20.0	21.0		ug/L	105	65 - 125	
m-Xylene & p-Xylene	20.0	20.5		ug/L	102	75 - 130	
o-Xylene	20.0	20.0		ug/L	100	80 - 120	
Toluene	20.0	18.7		ug/L	94	75 - 120	

Surrogate	LCs	LCs	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	107		75 - 120			
Dibromofluoromethane (Surr)	104		85 - 115			
1,2-Dichloroethane-d4 (Surr)	106		70 - 120			
Toluene-d8 (Surr)	97		85 - 120			
Trifluorotoluene (Surr)	112		70 - 136			

**Lab Sample ID: LCSD 580-202129/6**

**Matrix: Water**

**Analysis Batch: 202129**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike	LCSD	LCSD	D	%Rec	%Rec.	RPD	RPD Limit
	Added	Result	Qualifier					
Benzene	20.1	19.2		ug/L	96	80 - 120	1	30
Ethylbenzene	20.1	19.1		ug/L	95	75 - 125	0	30
Methyl tert-butyl ether	20.0	20.9		ug/L	104	65 - 125	1	30
m-Xylene & p-Xylene	20.0	20.5		ug/L	102	75 - 130	0	30
o-Xylene	20.0	20.3		ug/L	101	80 - 120	1	30
Toluene	20.0	19.0		ug/L	95	75 - 120	1	30

Surrogate	LCSD	LCSD	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
4-Bromofluorobenzene (Surr)	107		75 - 120			

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53397-1

SDG: 354972

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID:** LCSD 580-202129/6

**Matrix:** Water

**Analysis Batch:** 202129

**Client Sample ID:** Lab Control Sample Dup

**Prep Type:** Total/NA

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Dibromofluoromethane (Surr)	103		85 - 115
1,2-Dichloroethane-d4 (Surr)	108		70 - 120
Toluene-d8 (Surr)	96		85 - 120
Trifluorotoluene (Surr)	108		70 - 136

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

**Lab Sample ID:** MB 580-201556/1-A

**Matrix:** Water

**Analysis Batch:** 202733

**Client Sample ID:** Method Blank

**Prep Type:** Total/NA

**Prep Batch:** 201556

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.010		ug/L	09/23/15 15:58	10/08/15 10:19		1
2-Methylnaphthalene	ND		0.013		ug/L	09/23/15 15:58	10/08/15 10:19		1
1-Methylnaphthalene	ND		0.010		ug/L	09/23/15 15:58	10/08/15 10:19		1
Acenaphthylene	ND		0.010		ug/L	09/23/15 15:58	10/08/15 10:19		1
Acenaphthene	ND		0.010		ug/L	09/23/15 15:58	10/08/15 10:19		1
Fluorene	ND		0.010		ug/L	09/23/15 15:58	10/08/15 10:19		1
Phenanthrene	ND		0.10		ug/L	09/23/15 15:58	10/08/15 10:19		1
Anthracene	ND		0.025		ug/L	09/23/15 15:58	10/08/15 10:19		1
Fluoranthene	ND		0.050		ug/L	09/23/15 15:58	10/08/15 10:19		1
Pyrene	ND		0.050		ug/L	09/23/15 15:58	10/08/15 10:19		1
Benzo[a]anthracene	ND		0.010		ug/L	09/23/15 15:58	10/08/15 10:19		1
Chrysene	ND		0.010		ug/L	09/23/15 15:58	10/08/15 10:19		1
Benzo[a]pyrene	ND		0.010		ug/L	09/23/15 15:58	10/08/15 10:19		1
Indeno[1,2,3-cd]pyrene	ND		0.010		ug/L	09/23/15 15:58	10/08/15 10:19		1
Dibenz(a,h)anthracene	ND		0.010		ug/L	09/23/15 15:58	10/08/15 10:19		1
Benzo[g,h,i]perylene	ND		0.010		ug/L	09/23/15 15:58	10/08/15 10:19		1
Benzo[b]fluoranthene	ND		0.010		ug/L	09/23/15 15:58	10/08/15 10:19		1
Benzo[k]fluoranthene	ND		0.010		ug/L	09/23/15 15:58	10/08/15 10:19		1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
Terphenyl-d14	112		64 - 150				09/23/15 15:58	10/08/15 10:19	1

**Lab Sample ID:** LCS 580-201556/2-A

**Matrix:** Water

**Analysis Batch:** 202733

**Client Sample ID:** Lab Control Sample

**Prep Type:** Total/NA

**Prep Batch:** 201556

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Naphthalene	1.00	0.763		ug/L	76	54 - 106	
2-Methylnaphthalene	1.00	0.865		ug/L	86	54 - 114	
1-Methylnaphthalene	1.00	0.837		ug/L	84	57 - 115	
Acenaphthylene	1.00	0.285	*	ug/L	28	30 - 127	
Acenaphthene	1.00	0.758		ug/L	76	54 - 109	
Fluorene	1.00	0.926		ug/L	93	50 - 130	
Phenanthrene	1.00	0.877		ug/L	88	53 - 115	
Anthracene	1.00	0.218	*	ug/L	22	30 - 130	

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53397-1

SDG: 354972

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

**Lab Sample ID: LCS 580-201556/2-A**

**Matrix: Water**

**Analysis Batch: 202733**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 201556**

**%Rec.**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Fluoranthene	1.00	0.873		ug/L	87	58 - 128	
Pyrene	1.00	0.805		ug/L	80	53 - 121	
Benzo[a]anthracene	1.00	0.536		ug/L	54	35 - 125	
Chrysene	1.00	0.872		ug/L	87	57 - 120	
Benzo[a]pyrene	1.00	0.205	*	ug/L	21	30 - 127	
Indeno[1,2,3-cd]pyrene	1.00	1.08		ug/L	108	53 - 131	
Dibenz(a,h)anthracene	1.00	1.15		ug/L	115	60 - 136	
Benzo[g,h,i]perylene	1.00	1.02		ug/L	102	51 - 128	
Benzo[b]fluoranthene	1.00	1.11		ug/L	111	59 - 126	
Benzo[k]fluoranthene	1.00	1.12		ug/L	112	49 - 136	
<b>Surrogate</b>		<b>LCS</b>	<b>LCS</b>				
<i>Terphenyl-d14</i>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			
		113		64 - 150			

**Lab Sample ID: LCSD 580-201556/3-A**

**Matrix: Water**

**Analysis Batch: 202733**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 201556**

**%Rec.**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Naphthalene	1.00	0.734		ug/L	73	54 - 106		4	20
2-Methylnaphthalene	1.00	0.838		ug/L	84	54 - 114		3	20
1-Methylnaphthalene	1.00	0.820		ug/L	82	57 - 115		2	20
Acenaphthylene	1.00	0.252	*	ug/L	25	30 - 127		12	20
Acenaphthene	1.00	0.691		ug/L	69	54 - 109		9	20
Fluorene	1.00	0.866		ug/L	87	50 - 130		7	20
Phenanthrene	1.00	0.824		ug/L	82	53 - 115		6	20
Anthracene	1.00	0.205	*	ug/L	20	30 - 130		6	20
Fluoranthene	1.00	0.830		ug/L	83	58 - 128		5	20
Pyrene	1.00	0.760		ug/L	76	53 - 121		6	20
Benzo[a]anthracene	1.00	0.498		ug/L	50	35 - 125		7	20
Chrysene	1.00	0.829		ug/L	83	57 - 120		5	20
Benzo[a]pyrene	1.00	0.160	*	ug/L	16	30 - 127		25	20
Indeno[1,2,3-cd]pyrene	1.00	0.910		ug/L	91	53 - 131		17	20
Dibenz(a,h)anthracene	1.00	0.966		ug/L	97	60 - 136		18	20
Benzo[g,h,i]perylene	1.00	0.849		ug/L	85	51 - 128		18	20
Benzo[b]fluoranthene	1.00	0.964		ug/L	96	59 - 126		14	20
Benzo[k]fluoranthene	1.00	0.968		ug/L	97	49 - 136		15	20
<b>Surrogate</b>		<b>LCSD</b>	<b>LCSD</b>						
<i>Terphenyl-d14</i>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>					
		108		64 - 150					

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53397-1

SDG: 354972

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

**Lab Sample ID: MB 580-201682/5**

**Matrix: Water**

**Analysis Batch: 201682**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Gasoline	ND		0.050		mg/L			09/24/15 18:13	1
<b>Surrogate</b>									
4-Bromofluorobenzene (Surr)									
92		Limits						09/24/15 18:13	
Trifluorotoluene (Surr)		110		50 - 150				09/24/15 18:13	

**Lab Sample ID: LCS 580-201682/6**

**Matrix: Water**

**Analysis Batch: 201682**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	MB	MB	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
	Result	Qualifier							
Gasoline	ND		1.16	1.08	mg/L			93	79 - 110
<b>Surrogate</b>									
4-Bromofluorobenzene (Surr)									
98		Limits		50 - 150					
Trifluorotoluene (Surr)		116		50 - 150					

**Lab Sample ID: LCSD 580-201682/7**

**Matrix: Water**

**Analysis Batch: 201682**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	MB	MB	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
	Result	Qualifier									
Gasoline	ND		1.16	1.10	mg/L			95	79 - 110	2	20
<b>Surrogate</b>											
4-Bromofluorobenzene (Surr)											
98		Limits		50 - 150							
Trifluorotoluene (Surr)		117		50 - 150							

**Lab Sample ID: MB 580-201801/5**

**Matrix: Water**

**Analysis Batch: 201801**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB	MB	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
	Result	Qualifier									
Gasoline	ND		0.050		mg/L						
<b>Surrogate</b>											
4-Bromofluorobenzene (Surr)											
92		Limits		50 - 150							
Trifluorotoluene (Surr)		107		50 - 150							

**Lab Sample ID: LCS 580-201801/6**

**Matrix: Water**

**Analysis Batch: 201801**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	MB	MB	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
	Result	Qualifier							
Gasoline	ND		1.16	1.06	mg/L			91	79 - 110

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53397-1

SDG: 354972

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC) (Continued)

**Lab Sample ID: LCS 580-201801/6**

**Matrix: Water**

**Analysis Batch: 201801**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Surrogate	LCS %Recovery	LCS Qualifier	Limits
4-Bromofluorobenzene (Surr)	98		50 - 150
Trifluorotoluene (Surr)	111		50 - 150

**Lab Sample ID: LCSD 580-201801/7**

**Matrix: Water**

**Analysis Batch: 201801**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec.	RPD	
				mg/L		Limits	Limit	
Gasoline	1.16	1.08			93	79 - 110	2	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	99		50 - 150
Trifluorotoluene (Surr)	113		50 - 150

**Lab Sample ID: 580-53447-B-4 MSD**

**Matrix: Water**

**Analysis Batch: 201801**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	RPD	
						mg/L		Limits	Limit	
Gasoline	1.0		1.16	1.98			85	50 - 150	3	35

Surrogate	MSD %Recovery	MSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	118		50 - 150
Trifluorotoluene (Surr)	113		50 - 150

**Lab Sample ID: 580-53447-E-4 MS**

**Matrix: Water**

**Analysis Batch: 201801**

**Client Sample ID: Matrix Spike**

**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec.
						mg/L		Limits
Gasoline	1.0		1.16	2.04			90	50 - 150

Surrogate	MS %Recovery	MS Qualifier	Limits
4-Bromofluorobenzene (Surr)	118		50 - 150
Trifluorotoluene (Surr)	111		50 - 150

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

**Lab Sample ID: MB 580-201524/1-A**

**Matrix: Water**

**Analysis Batch: 201839**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 201524**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.11		mg/L		09/23/15 12:56	09/28/15 15:30	1
Motor Oil (>C24-C36)	ND		0.25		mg/L		09/23/15 12:56	09/28/15 15:30	1

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53397-1

SDG: 354972

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

**Lab Sample ID:** MB 580-201524/1-A

**Matrix:** Water

**Analysis Batch:** 201839

**Client Sample ID:** Method Blank

**Prep Type:** Total/NA

**Prep Batch:** 201524

Surrogate	MB	MB	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o</i> -Terphenyl			98		50 - 150	09/23/15 12:56	09/28/15 15:30	1

**Lab Sample ID:** LCS 580-201524/2-A

**Matrix:** Water

**Analysis Batch:** 201839

**Client Sample ID:** Lab Control Sample

**Prep Type:** Total/NA

**Prep Batch:** 201524

Analyte	Spike	LCS	LCS	Unit	D	%Rec.	Limits	Prepared
	Added	Result	Qualifier					
#2 Diesel (C10-C24)	0.500	0.596		mg/L	119	59 - 120		
Motor Oil (>C24-C36)	0.502	0.547		mg/L	109	71 - 140		
<i>o</i> -Terphenyl	113			50 - 150				

**Lab Sample ID:** LCSD 580-201524/3-A

**Matrix:** Water

**Analysis Batch:** 201839

**Client Sample ID:** Lab Control Sample Dup

**Prep Type:** Total/NA

**Prep Batch:** 201524

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec.	Limits	Prepared	RPD	Limit
	Added	Result	Qualifier							
#2 Diesel (C10-C24)	0.500	0.534		mg/L	107	59 - 120			11	27
Motor Oil (>C24-C36)	0.502	0.486		mg/L	97	71 - 140			12	27
<i>o</i> -Terphenyl	105			50 - 150						

## Method: 1631E - Mercury, Low Level (CVAFS)

**Lab Sample ID:** MB 240-198999/1-A

**Matrix:** Water

**Analysis Batch:** 199370

**Client Sample ID:** Method Blank

**Prep Type:** Total/NA

**Prep Batch:** 198999

Analyte	MB	MB	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier									
Mercury	ND				0.50		ng/L		09/24/15 16:15	09/25/15 08:24	1

**Lab Sample ID:** LCS 240-198999/2-A

**Matrix:** Water

**Analysis Batch:** 199370

**Client Sample ID:** Lab Control Sample

**Prep Type:** Total/NA

**Prep Batch:** 198999

Analyte	Spike	LCS	LCS	Unit	D	%Rec.	Limits	Prepared
	Added	Result	Qualifier					
Mercury	5.00	4.98		ng/L	100	77 - 123		

**Lab Sample ID:** 240-55774-B-1-C MS

**Matrix:** Water

**Analysis Batch:** 199370

**Client Sample ID:** Matrix Spike

**Prep Type:** Total/NA

**Prep Batch:** 198999

Analyte	Sample	Sample	Spike	Result	MS	MS	Unit	D	%Rec.	Limits
	Result	Qualifier								
Mercury	0.643		5.00	6.48			ng/L	117	71 - 125	

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53397-1

SDG: 354972

## Method: 1631E - Mercury, Low Level (CVAFS) (Continued)

**Lab Sample ID: 240-55774-B-1-D MSD**

**Matrix: Water**

**Analysis Batch: 199370**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total/NA**

**Prep Batch: 198999**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec.	RPD
Mercury	0.643		5.00	6.88		ng/L	125	71 - 125	6 24

**Lab Sample ID: MB 240-199000/1-A**

**Matrix: Water**

**Analysis Batch: 199175**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 199000**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	ND		0.50		ng/L	09/24/15 16:45	09/25/15 13:20		1

**Lab Sample ID: LCS 240-199000/2-A**

**Matrix: Water**

**Analysis Batch: 199175**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 199000**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	Limits
Mercury	5.00	4.67		ng/L	93	77 - 123	

## Method: 6020 - Metals (ICP/MS)

**Lab Sample ID: MB 580-201922/19-A**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 201922**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0050		mg/L	09/28/15 13:59	09/29/15 00:53		5
Barium	ND		0.0060		mg/L	09/28/15 13:59	09/29/15 00:53		5
Cadmium	ND		0.0020		mg/L	09/28/15 13:59	09/29/15 00:53		5
Chromium	ND		0.0020		mg/L	09/28/15 13:59	09/29/15 00:53		5
Copper	ND		0.010		mg/L	09/28/15 13:59	09/29/15 00:53		5
Lead	ND		0.0020		mg/L	09/28/15 13:59	09/29/15 00:53		5
Manganese	ND		0.010		mg/L	09/28/15 13:59	09/29/15 00:53		5
Selenium	ND		0.0050		mg/L	09/28/15 13:59	09/29/15 00:53		5
Silver	ND		0.0020		mg/L	09/28/15 13:59	09/29/15 00:53		5
Zinc	ND		0.035		mg/L	09/28/15 13:59	09/29/15 00:53		5

**Lab Sample ID: LCS 580-201922/20-A**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 201922**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	Limits
Arsenic	4.00	4.09		mg/L	102	80 - 120	
Barium	4.00	4.21		mg/L	105	80 - 120	
Cadmium	0.100	0.105		mg/L	105	80 - 120	
Chromium	0.400	0.390		mg/L	98	80 - 120	
Copper	0.500	0.504		mg/L	101	80 - 120	
Lead	1.00	0.938		mg/L	94	80 - 120	
Manganese	1.00	1.01		mg/L	101	80 - 120	
Selenium	4.00	4.24		mg/L	106	80 - 120	
Silver	0.600	0.581		mg/L	97	80 - 120	
Zinc	4.00	3.96		mg/L	99	80 - 120	

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53397-1

SDG: 354972

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: LCSD 580-201922/21-A**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 201922**

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec	Limits	RPD	Limit
	Added	Result	Qualifier						
Arsenic	4.00	4.03		mg/L	101	80 - 120	1	20	
Barium	4.00	4.14		mg/L	104	80 - 120	2	20	
Cadmium	0.100	0.103		mg/L	103	80 - 120	2	20	
Chromium	0.400	0.397		mg/L	99	80 - 120	2	20	
Copper	0.500	0.502		mg/L	100	80 - 120	1	20	
Lead	1.00	0.926		mg/L	93	80 - 120	1	20	
Manganese	1.00	1.00		mg/L	100	80 - 120	0	20	
Selenium	4.00	4.11		mg/L	103	80 - 120	3	20	
Silver	0.600	0.579		mg/L	96	80 - 120	0	20	
Zinc	4.00	4.02		mg/L	101	80 - 120	1	20	

**Lab Sample ID: 580-53396-D-2-C MS**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Matrix Spike**

**Prep Type: Total/NA**

**Prep Batch: 201922**

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier						
Arsenic	0.0093		4.00	4.36		mg/L	109	80 - 120			
Barium	0.056		4.00	4.47		mg/L	110	80 - 120			
Cadmium	ND		0.100	0.111		mg/L	111	80 - 120			
Chromium	ND		0.400	0.434		mg/L	108	80 - 120			
Copper	ND		0.500	0.540		mg/L	108	80 - 120			
Lead	ND		1.00	1.01		mg/L	101	80 - 120			
Manganese	3.6		1.00	4.73		mg/L	111	80 - 120			
Selenium	ND		4.00	4.54		mg/L	114	80 - 120			
Silver	ND		0.600	0.612		mg/L	102	80 - 120			
Zinc	ND		4.00	4.31		mg/L	107	80 - 120			

**Lab Sample ID: 580-53396-D-2-D MSD**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total/NA**

**Prep Batch: 201922**

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	Limits	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier						
Arsenic	0.0093		4.00	4.28		mg/L	107	80 - 120	2	20	
Barium	0.056		4.00	4.40		mg/L	109	80 - 120	2	20	
Cadmium	ND		0.100	0.108		mg/L	108	80 - 120	3	20	
Chromium	ND		0.400	0.426		mg/L	106	80 - 120	2	20	
Copper	ND		0.500	0.529		mg/L	106	80 - 120	2	20	
Lead	ND		1.00	0.996		mg/L	100	80 - 120	1	20	
Manganese	3.6		1.00	4.71		mg/L	110	80 - 120	0	20	
Selenium	ND		4.00	4.45		mg/L	111	80 - 120	2	20	
Silver	ND		0.600	0.605		mg/L	101	80 - 120	1	20	
Zinc	ND		4.00	4.23		mg/L	105	80 - 120	2	20	

**Lab Sample ID: 580-53396-D-2-B DU**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Duplicate**

**Prep Type: Total/NA**

**Prep Batch: 201922**

Analyte	Sample	Sample	DU	DU	Unit	D		RPD	Limit
	Result	Qualifier							
Arsenic	0.0093		0.00931		mg/L			0.2	20

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53397-1

SDG: 354972

## Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 580-53396-D-2-B DU

Matrix: Water

Analysis Batch: 201970

Client Sample ID: Duplicate

Prep Type: Total/NA

Prep Batch: 201922

RPD

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Barium	0.056		0.0568		mg/L		1	20
Cadmium	ND		ND		mg/L		NC	20
Chromium	ND		ND		mg/L		NC	20
Copper	ND		ND		mg/L		NC	20
Lead	ND		ND		mg/L		NC	20
Manganese	3.6		3.65		mg/L		1	20
Selenium	ND		ND		mg/L		NC	20
Silver	ND		ND		mg/L		NC	20
Zinc	ND		ND		mg/L		NC	20

# Lab Chronicle

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53397-1

SDG: 354972

**Client Sample ID: Trip Blanks**

Date Collected: 09/17/15 00:00

Date Received: 09/17/15 14:00

**Lab Sample ID: 580-53397-1**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	NWTPH-Gx		1	201682	09/24/15 19:52	CJ	TAL SEA

**Client Sample ID: BD-RI-Phillips-2**

Date Collected: 09/17/15 00:00

Date Received: 09/17/15 14:00

**Lab Sample ID: 580-53397-2**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	202129	09/30/15 20:06	TL1	TAL SEA
Total/NA	Prep	3520C			201556	09/23/15 15:58	JDR	TAL SEA
Total/NA	Analysis	8270C SIM		10	202733	10/08/15 14:11	AHP	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	201801	09/26/15 08:26	HDK	TAL SEA
Total/NA	Prep	3510C			201524	09/23/15 12:56	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		5	201839	09/28/15 19:07	KW	TAL SEA
Total/NA	Prep	1631E			198999	09/24/15 16:15	DNS	TAL CAN
Total/NA	Analysis	1631E		1	199370	09/25/15 08:57	DSH	TAL CAN
Total/NA	Prep	3010A			201922	09/28/15 13:59	PAB	TAL SEA
Total/NA	Analysis	6020		5	201970	09/29/15 01:48	FCW	TAL SEA

**Client Sample ID: B-35-RI-Phillips**

Date Collected: 09/17/15 10:00

Date Received: 09/17/15 14:00

**Lab Sample ID: 580-53397-3**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	202129	09/30/15 20:46	TL1	TAL SEA
Total/NA	Prep	3520C			201556	09/23/15 15:58	JDR	TAL SEA
Total/NA	Analysis	8270C SIM		10	202733	10/08/15 14:34	AHP	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	201801	09/26/15 09:00	HDK	TAL SEA
Total/NA	Prep	3510C			201524	09/23/15 12:56	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		5	201839	09/28/15 19:25	KW	TAL SEA
Total/NA	Prep	1631E			198999	09/24/15 16:15	DNS	TAL CAN
Total/NA	Analysis	1631E		1	199370	09/25/15 09:01	DSH	TAL CAN
Total/NA	Prep	3010A			201922	09/28/15 13:59	PAB	TAL SEA
Total/NA	Analysis	6020		5	201970	09/29/15 01:53	FCW	TAL SEA

**Client Sample ID: B-40-RI-Phillips**

Date Collected: 09/17/15 09:15

Date Received: 09/17/15 14:00

**Lab Sample ID: 580-53397-4**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	202129	09/30/15 21:13	TL1	TAL SEA
Total/NA	Prep	3520C			201556	09/23/15 15:58	JDR	TAL SEA
Total/NA	Analysis	8270C SIM		100	202733	10/08/15 14:57	AHP	TAL SEA

TestAmerica Seattle

# Lab Chronicle

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53397-1

SDG: 354972

**Client Sample ID: B-40-RI-Phillips**

Date Collected: 09/17/15 09:15

Date Received: 09/17/15 14:00

**Lab Sample ID: 580-53397-4**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	NWTPH-Gx		1	201801	09/26/15 09:33	HDK	TAL SEA
Total/NA	Prep	3510C			201524	09/23/15 12:56	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		5	201839	09/28/15 19:43	KW	TAL SEA
Total/NA	Prep	1631E			198999	09/24/15 16:15	DNS	TAL CAN
Total/NA	Analysis	1631E		1	199370	09/25/15 09:04	DSH	TAL CAN
Total/NA	Prep	3010A			201922	09/28/15 13:59	PAB	TAL SEA
Total/NA	Analysis	6020		5	201970	09/29/15 01:57	FCW	TAL SEA

**Client Sample ID: B-36-RI-Phillips**

Date Collected: 09/17/15 11:15

Date Received: 09/17/15 14:00

**Lab Sample ID: 580-53397-5**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	202129	09/30/15 21:39	TL1	TAL SEA
Total/NA	Prep	3520C			201556	09/23/15 15:58	JDR	TAL SEA
Total/NA	Analysis	8270C SIM		10	202733	10/08/15 15:20	AHP	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	201801	09/26/15 07:20	HDK	TAL SEA
Total/NA	Prep	3510C			201524	09/23/15 12:56	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		5	201839	09/28/15 20:01	KW	TAL SEA
Total/NA	Prep	1631E			198999	09/24/15 16:15	DNS	TAL CAN
Total/NA	Analysis	1631E		1	199370	09/25/15 09:08	DSH	TAL CAN
Total/NA	Prep	3010A			201922	09/28/15 13:59	PAB	TAL SEA
Total/NA	Analysis	6020		5	201970	09/29/15 02:02	FCW	TAL SEA

**Client Sample ID: EB-RI-Phillips-1**

Date Collected: 09/17/15 12:30

Date Received: 09/17/15 14:00

**Lab Sample ID: 580-53397-6**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	202129	09/30/15 22:07	TL1	TAL SEA
Total/NA	Prep	3520C			201556	09/23/15 15:58	JDR	TAL SEA
Total/NA	Analysis	8270C SIM		1	202733	10/08/15 15:43	AHP	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	201801	09/26/15 06:47	HDK	TAL SEA
Total/NA	Prep	3510C			201524	09/23/15 12:56	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		5	201839	09/28/15 20:19	KW	TAL SEA
Total/NA	Prep	1631E			198999	09/24/15 16:15	DNS	TAL CAN
Total/NA	Analysis	1631E		1	199370	09/25/15 09:12	DSH	TAL CAN
Total/NA	Prep	3010A			201922	09/28/15 13:59	PAB	TAL SEA
Total/NA	Analysis	6020		5	201970	09/29/15 00:26	FCW	TAL SEA

TestAmerica Seattle

# Lab Chronicle

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53397-1

SDG: 354972

**Client Sample ID: EB-RI-Phillips-2**

Date Collected: 09/17/15 13:30

Date Received: 09/17/15 14:00

**Lab Sample ID: 580-53397-7**

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	202129	09/30/15 22:34	TL1	TAL SEA
Total/NA	Prep	3520C			201556	09/23/15 15:58	JDR	TAL SEA
Total/NA	Analysis	8270C SIM		1	202733	10/08/15 16:06	AHP	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	201801	09/26/15 07:54	HDK	TAL SEA
Total/NA	Prep	3510C			201524	09/23/15 12:56	RBL	TAL SEA
Total/NA	Analysis	NWTPH-Dx		5	201839	09/28/15 20:38	KW	TAL SEA
Total/NA	Prep	1631E			198999	09/24/15 16:15	DNS	TAL CAN
Total/NA	Analysis	1631E		1	199175	09/25/15 16:01	DSH	TAL CAN
Total/NA	Prep	3010A			201922	09/28/15 13:59	PAB	TAL SEA
Total/NA	Analysis	6020		5	201970	09/29/15 00:30	FCW	TAL SEA

## Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

## Certification Summary

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53397-1

SDG: 354972

### Laboratory: TestAmerica Seattle

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-022	03-02-16
California	State Program	9	2901	01-31-17
L-A-B	DoD ELAP		L2236	01-19-16
L-A-B	ISO/IEC 17025		L2236	01-19-16
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-06-16
US Fish & Wildlife	Federal		LE058448-0	02-28-16
USDA	Federal		P330-14-00126	04-08-17
Washington	State Program	10	C553	02-17-16

### Laboratory: TestAmerica Canton

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	NELAP	9	01144CA	06-30-14 *
California	State Program	9	2927	04-30-17
Connecticut	State Program	1	PH-0590	12-31-15
Illinois	NELAP	5	200004	07-31-16
Kansas	NELAP	7	E-10336	01-31-16 *
Kentucky (UST)	State Program	4	58	02-26-16
Kentucky (WW)	State Program	4	98016	12-31-15
L-A-B	DoD ELAP		L2315	07-18-16
Minnesota	NELAP	5	039-999-348	12-31-15
Nevada	State Program	9	OH-000482008A	07-31-16
New Jersey	NELAP	2	OH001	11-30-15 *
New York	NELAP	2	10975	03-31-16
Ohio VAP	State Program	5	CL0024	10-31-15 *
Oregon	NELAP	10	4062	02-23-16
Pennsylvania	NELAP	3	68-00340	08-31-16
Texas	NELAP	6	T104704517-15-5	08-31-16
USDA	Federal		P330-13-00319	11-26-16
Virginia	NELAP	3	460175	09-14-16
Washington	State Program	10	C971	01-12-16
West Virginia DEP	State Program	3	210	12-31-15
Wisconsin	State Program	5	999518190	08-31-16

\* Certification renewal pending - certification considered valid.

## Sample Summary

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 Willbridge GWM B0045452.0018.0042

TestAmerica Job ID: 580-53397-1

SDG: 354972

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-53397-1	Trip Blanks	Water	09/17/15 00:00	09/17/15 14:00
580-53397-2	BD-RI-Phillips-2	Water	09/17/15 00:00	09/17/15 14:00
580-53397-3	B-35-RI-Phillips	Water	09/17/15 10:00	09/17/15 14:00
580-53397-4	B-40-RI-Phillips	Water	09/17/15 09:15	09/17/15 14:00
580-53397-5	B-36-RI-Phillips	Water	09/17/15 11:15	09/17/15 14:00
580-53397-6	EB-RI-Phillips-1	Water	09/17/15 12:30	09/17/15 14:00
580-53397-7	EB-RI-Phillips-2	Water	09/17/15 13:30	09/17/15 14:00

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TestAmerica Seattle

**TestAmerica Portland**  
2405 SW 11th Avenue

*Journal of Health Politics, Policy and Law*

Beaverton, OR 97008  
Phone: 503.906.9200 Fax

## **Chain of Custody Record**

001000

TextAmerica

**ENVIRONMENTAL TESTING  
Laboratories, Inc.**

TAL-8210 (0713)

Sampter MA UHAC

For Lab Use Only:

### Walk-in Client:

Job / SDG No.:

#### Sample Specific Notes:

**TestAmerica Portland**  
9405 SW Nimbus Avenue

**Beaverton, OR 97008**  
**Phone: 503.906.9200 Fax:**

## **Chain of Custody Record**

001683

TextAmerica

ENVIRONMENTAL TESTING

Laboratories, Inc.

TAL-8210 (0713)

20.21C18-7

## Chain of Custody Record



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

<b>Client Information (Sub Contract Lab)</b>		Sampler:	Lab PM: Murphy, Sarah A	Carrier Tracking No(s):	COC No: 580-30352.1		
Client Contact: Shipping/Receiving		Phone:	E-Mail: sarah.murphy@testamericainc.com	Page: Page 1 of 1			
Company: TestAmerica Laboratories, Inc.		Job #: 580-53397-1					
Address: 4101 Shuffel Street NW,		Due Date Requested: 9/29/2015	Analysis Requested				
City: North Canton		TAT Requested (days):					
State, Zip: OH, 44720							
Phone: 330-497-9396(Tel) 330-497-0772(Fax)		PO #:					
Email:		WO #:					
Project Name: 3Q2015 Willbridge GWM B0045452.0018.0042		Project #: 58008238					
Site:		SSOW#:					
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, T=tissue, A=Air)	Preservation Code: <small>(ON Job Sheet indicates preservation code)</small>	Date Number of Collection Point
BD-RI-Phillips-2 (580-53397-2)		9/17/15	Pacific		Water	X	1621E131E-Ped
B-35-RI-Phillips (580-53397-3)		9/17/15	10:00 Pacific		Water	X	1621E131E-Ped
B-40-RI-Phillips (580-53397-4)		9/17/15	09:15 Pacific		Water	X	1621E131E-Ped
B-36-RI-Phillips (580-53397-5)		9/17/15	11:15 Pacific		Water	X	1621E131E-Ped
EB-RI-Phillips-1 (580-53397-6)		9/17/15	12:30 Pacific		Water	X	1621E131E-Ped
EB-RI-Phillips-2 (580-53397-7)		9/17/15	13:30 Pacific		Water	X	1621E131E-Ped
Possible Hazard Identification		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)					
Unconfirmed		<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months					
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:					
Empty Kit Relinquished by:		Date:	Time:	Method of Shipment:			
Relinquished by: <i>Ph. M. D.</i>		Date/Time: <i>9/18/15 @ 1500</i>	Company: <i>TAI</i>	Received by: <i>S. Murphy</i>	Date/Time: <i>9/21/15 9:45</i>	Company: <i>TAI/Canton</i>	
Relinquished by:		Date/Time:	Company	Received by:	Date/Time:	Company	
Relinquished by:		Date/Time:	Company	Received by:	Date/Time:	Company	
Custody Seals Intact: △ Yes △ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:			

TestAmerica Canton Sample Receipt Form/Narrative

Login # : \_\_\_\_\_

Canton Facility

Client <u>TA Seattle</u>	Site Name _____	Cooler Unpacked by: <u>Willy</u>
Cooler Received on <u>9/15/15</u>	Opened on <u>9/15/15</u>	
FedEx: 1 <sup>st</sup> Grd Exp UPS FAS Stetson	Client Drop Off TestAmerica Courier	Other _____
Receipt After-hours: Drop-off Date/Time _____		
TestAmerica Cooler # _____	Foam Box Client Cooler <u>Box</u>	Storage Location _____
Packing material used: <u>Bubble Wrap</u>	Foam Plastic Bag	None Other _____
COOLANT: Wet Ice Blue Ice Dry Ice Water	<u>None</u>	
1. Cooler temperature upon receipt		
IR GUN# A (CF +1.0 °C)	Observed Cooler Temp.	°C Corrected Cooler Temp. °C
IR-GUN# 4 (CF +0.5 °C)	Observed Cooler Temp.	°C Corrected Cooler Temp. °C
IR-GUN# 5 (CF +0.4 °C)	Observed Cooler Temp.	°C Corrected Cooler Temp. °C
IR GUN# 8 (CF -1.5 °C)	Observed Cooler Temp.	20.2 °C Corrected Cooler Temp. 18.7 °C
2. Were custody seals on the outside of the cooler(s)? If Yes Quantity	Yes	No
-Were custody seals on the outside of the cooler(s) signed & dated?	Yes	No NA
-Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes	No
3. Shippers' packing slip attached to the cooler(s)?	Yes	No
4. Did custody papers accompany the sample(s)?	Yes	No
5. Were the custody papers relinquished & signed in the appropriate place?	Yes	No
6. Was/were the person(s) who collected the samples clearly identified on the COC?	Yes	No
7. Did all bottles arrive in good condition (Unbroken)?	Yes	No
8. Could all bottle labels be reconciled with the COC?	Yes	No
9. Were correct bottle(s) used for the test(s) indicated?	Yes	No
10. Sufficient quantity received to perform indicated analyses?	Yes	No
11. Were sample(s) at the correct pH upon receipt?	Yes	No NA pH Strip Lot# <u>HC554612</u>
12. Were VOAs on the COC?	Yes	No
13. Were air bubbles >6 mm in any VOA vials?	Yes	No NA
14. Was a trip blank present in the cooler(s)? Trip Blank Lot # _____	Yes	No

Contacted PM \_\_\_\_\_ Date \_\_\_\_\_ by \_\_\_\_\_ via Verbal Voice Mail Other \_\_\_\_\_  
 Concerning \_\_\_\_\_

See Multiple Cooler Form

## Login Sample Receipt Checklist

Client: ARCADIS U.S. Inc

Job Number: 580-53397-1

SDG Number: 354972

**Login Number: 53397**

**List Source: TestAmerica Seattle**

**List Number: 1**

**Creator: Lehman, Clarissa A**

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	

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# TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

## ANALYTICAL REPORT

TestAmerica Laboratories, Inc.

TestAmerica Seattle  
5755 8th Street East  
Tacoma, WA 98424  
Tel: (253)922-2310

TestAmerica Job ID: 580-53491-1

TestAmerica Sample Delivery Group: CVX Site 354972  
Client Project/Site: 3Q2015 GWM B0046601.0018.00420

For:

ARCADIS U.S. Inc  
111 SW Columbia Street  
Suite 670  
Portland, Oregon 97201

Attn: Brian Marcum

Sarah Murphy

Authorized for release by:  
10/30/2015 3:58:05 PM

Sarah Murphy, Project Manager I  
(253)922-2310  
[sarah.murphy@testamericainc.com](mailto:sarah.murphy@testamericainc.com)

### LINKS

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This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

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# Case Narrative

Client: ARCADIS U.S. Inc  
Project/Site: 3Q2015 GWM B0046601.0018.00420

TestAmerica Job ID: 580-53491-1  
SDG: CVX Site 354972

## Job ID: 580-53491-1

### Laboratory: TestAmerica Seattle

#### Narrative

##### Job Narrative 580-53491-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 9/21/2015 3:00 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.8° C.

#### GC/MS VOA

Method(s) 8260B: The following sample was analyzed outside of analytical holding time. U-2-RI-PHILLIPS (580-53491-3).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### GC/MS Semi VOA

Method(s) 8270C SIM: The following sample was diluted due to the nature of the sample matrix: U-2-RI-PHILLIPS (580-53491-3) at 10.0. Elevated reporting limits (RLs) are provided.

Method(s) 8270C SIM: The sample extract was initially diluted at 100x due to the matrix of the sample (bright neon pink) and presence of non-target compounds: B-4-RI-PHILLIPS (580-53491-2)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

#### GC Semi VOA

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Metals

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

#### Organic Prep

No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

# Definitions/Glossary

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 GWM B0046601.0018.00420

TestAmerica Job ID: 580-53491-1

SDG: CVX Site 354972

## Qualifiers

### GC/MS VOA

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time

## Glossary

### Abbreviation **These commonly used abbreviations may or may not be present in this report.**

□	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

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# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 GWM B0046601.0018.00420

TestAmerica Job ID: 580-53491-1

SDG: CVX Site 354972

**Client Sample ID: TRIP BLANK**

Date Collected: 09/21/15 00:00

Date Received: 09/21/15 15:00

**Lab Sample ID: 580-53491-1**

Matrix: Water

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050		mg/L			09/29/15 17:02	1
<b>Surrogate</b>									
4-Bromofluorobenzene (Surr)	94	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
Trifluorotoluene (Surr)	112			50 - 150				09/29/15 17:02	1
				50 - 150				09/29/15 17:02	1

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 GWM B0046601.0018.00420

TestAmerica Job ID: 580-53491-1

SDG: CVX Site 354972

**Client Sample ID: B-4-RI-PHILLIPS**

**Lab Sample ID: 580-53491-2**

**Matrix: Water**

Date Collected: 09/21/15 10:30

Date Received: 09/21/15 15:00

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			10/02/15 17:55	1
Ethylbenzene	ND		3.0		ug/L			10/02/15 17:55	1
Methyl tert-butyl ether	ND		1.0		ug/L			10/02/15 17:55	1
m-Xylene & p-Xylene	ND		3.0		ug/L			10/02/15 17:55	1
o-Xylene	ND		2.0		ug/L			10/02/15 17:55	1
Toluene	ND		2.0		ug/L			10/02/15 17:55	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	107			75 - 120				10/02/15 17:55	1
Dibromofluoromethane (Surr)	108			85 - 115				10/02/15 17:55	1
1,2-Dichloroethane-d4 (Surr)	118			70 - 120				10/02/15 17:55	1
Toluene-d8 (Surr)	99			85 - 120				10/02/15 17:55	1
Trifluorotoluene (Surr)	104			70 - 136				10/02/15 17:55	1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.95		ug/L		09/26/15 14:45	10/07/15 22:51	100
2-Methylnaphthalene	ND		1.2		ug/L		09/26/15 14:45	10/07/15 22:51	100
1-Methylnaphthalene	ND		0.95		ug/L		09/26/15 14:45	10/07/15 22:51	100
Acenaphthylene	ND		0.95		ug/L		09/26/15 14:45	10/07/15 22:51	100
Acenaphthene	ND		0.95		ug/L		09/26/15 14:45	10/07/15 22:51	100
Fluorene	ND		0.95		ug/L		09/26/15 14:45	10/07/15 22:51	100
Phenanthrene	ND		9.5		ug/L		09/26/15 14:45	10/07/15 22:51	100
Anthracene	ND		2.4		ug/L		09/26/15 14:45	10/07/15 22:51	100
Fluoranthene	ND		4.7		ug/L		09/26/15 14:45	10/07/15 22:51	100
Pyrene	ND		4.7		ug/L		09/26/15 14:45	10/07/15 22:51	100
Benzo[a]anthracene	ND		0.95		ug/L		09/26/15 14:45	10/07/15 22:51	100
Chrysene	ND		0.95		ug/L		09/26/15 14:45	10/07/15 22:51	100
Benzo[a]pyrene	ND		0.95		ug/L		09/26/15 14:45	10/07/15 22:51	100
Indeno[1,2,3-cd]pyrene	ND		0.95		ug/L		09/26/15 14:45	10/07/15 22:51	100
Dibenz(a,h)anthracene	ND		0.95		ug/L		09/26/15 14:45	10/07/15 22:51	100
Benzo[g,h,i]perylene	ND		0.95		ug/L		09/26/15 14:45	10/07/15 22:51	100
Benzo[b]fluoranthene	ND		0.95		ug/L		09/26/15 14:45	10/07/15 22:51	100
Benzo[k]fluoranthene	ND		0.95		ug/L		09/26/15 14:45	10/07/15 22:51	100
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Terphenyl-d14	96			64 - 150			09/26/15 14:45	10/07/15 22:51	100

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	0.52		0.050		mg/L			09/29/15 23:40	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	98			50 - 150				09/29/15 23:40	1
Trifluorotoluene (Surr)	106			50 - 150				09/29/15 23:40	1

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	2.8		1.3		mg/L		09/30/15 11:07	10/10/15 11:25	10
Motor Oil (>C24-C36)	ND		3.0		mg/L		09/30/15 11:07	10/10/15 11:25	10

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 GWM B0046601.0018.00420

TestAmerica Job ID: 580-53491-1

SDG: CVX Site 354972

**Client Sample ID: B-4-RI-PHILLIPS**

Date Collected: 09/21/15 10:30

Date Received: 09/21/15 15:00

**Lab Sample ID: 580-53491-2**

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o-Terphenyl</i>	87		50 - 150	09/30/15 11:07	10/10/15 11:25	10

**Method: 1631E - Mercury, Low Level (CVAFS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	3.2		0.50		ng/L	D	09/28/15 10:30	09/30/15 16:30	1

**Method: 6020 - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.0050		0.0050		mg/L	D	09/28/15 13:59	09/29/15 02:06	5
Barium	0.21		0.0060		mg/L	D	09/28/15 13:59	09/29/15 02:06	5
Cadmium	ND		0.0020		mg/L	D	09/28/15 13:59	09/29/15 02:06	5
Chromium	ND		0.0020		mg/L	D	09/28/15 13:59	09/29/15 02:06	5
Copper	ND		0.010		mg/L	D	09/28/15 13:59	09/29/15 02:06	5
Lead	ND		0.0020		mg/L	D	09/28/15 13:59	09/29/15 02:06	5
Manganese	1.9		0.010		mg/L	D	09/28/15 13:59	09/29/15 02:06	5
Selenium	ND		0.0050		mg/L	D	09/28/15 13:59	09/29/15 02:06	5
Silver	ND		0.0020		mg/L	D	09/28/15 13:59	09/29/15 02:06	5
Zinc	0.056		0.035		mg/L	D	09/28/15 13:59	09/29/15 02:06	5

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 GWM B0046601.0018.00420

TestAmerica Job ID: 580-53491-1

SDG: CVX Site 354972

**Client Sample ID: U-2-RI-PHILLIPS**

**Lab Sample ID: 580-53491-3**

**Matrix: Water**

Date Collected: 09/21/15 09:30

Date Received: 09/21/15 15:00

## Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND	H	2.0		ug/L			10/20/15 14:23	1
Ethylbenzene	ND	H	3.0		ug/L			10/20/15 14:23	1
Methyl tert-butyl ether	ND	H	1.0		ug/L			10/20/15 14:23	1
m-Xylene & p-Xylene	ND	H	3.0		ug/L			10/20/15 14:23	1
o-Xylene	ND	H	2.0		ug/L			10/20/15 14:23	1
Toluene	ND	H	2.0		ug/L			10/20/15 14:23	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	96			75 - 120				10/20/15 14:23	1
Dibromofluoromethane (Surr)	97			85 - 115				10/20/15 14:23	1
1,2-Dichloroethane-d4 (Surr)	109			70 - 120				10/20/15 14:23	1
Toluene-d8 (Surr)	99			85 - 120				10/20/15 14:23	1
Trifluorotoluene (Surr)	86			70 - 136				10/20/15 14:23	1

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.095		ug/L		09/26/15 14:45	10/07/15 23:37	10
2-Methylnaphthalene	ND		0.12		ug/L		09/26/15 14:45	10/07/15 23:37	10
<b>1-Methylnaphthalene</b>	<b>2.4</b>		0.095		ug/L		09/26/15 14:45	10/07/15 23:37	10
Acenaphthylene	ND		0.095		ug/L		09/26/15 14:45	10/07/15 23:37	10
Acenaphthene	ND		0.095		ug/L		09/26/15 14:45	10/07/15 23:37	10
Fluorene	ND		0.095		ug/L		09/26/15 14:45	10/07/15 23:37	10
Phenanthrene	ND		0.95		ug/L		09/26/15 14:45	10/07/15 23:37	10
Anthracene	ND		0.24		ug/L		09/26/15 14:45	10/07/15 23:37	10
Fluoranthene	ND		0.48		ug/L		09/26/15 14:45	10/07/15 23:37	10
Pyrene	ND		0.48		ug/L		09/26/15 14:45	10/07/15 23:37	10
Benzo[a]anthracene	ND		0.095		ug/L		09/26/15 14:45	10/07/15 23:37	10
Chrysene	ND		0.095		ug/L		09/26/15 14:45	10/07/15 23:37	10
Benzo[a]pyrene	ND		0.095		ug/L		09/26/15 14:45	10/07/15 23:37	10
Indeno[1,2,3-cd]pyrene	ND		0.095		ug/L		09/26/15 14:45	10/07/15 23:37	10
Dibenz(a,h)anthracene	ND		0.095		ug/L		09/26/15 14:45	10/07/15 23:37	10
Benzo[g,h,i]perylene	ND		0.095		ug/L		09/26/15 14:45	10/07/15 23:37	10
Benzo[b]fluoranthene	ND		0.095		ug/L		09/26/15 14:45	10/07/15 23:37	10
Benzo[k]fluoranthene	ND		0.095		ug/L		09/26/15 14:45	10/07/15 23:37	10
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
Terphenyl-d14	113			64 - 150				09/26/15 14:45	10/07/15 23:37

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
<b>Gasoline</b>	<b>0.34</b>		0.050		mg/L			09/30/15 00:13	1
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			<b>Prepared</b>	<b>Analyzed</b>	<b>Dil Fac</b>
4-Bromofluorobenzene (Surr)	101		50 - 150					09/30/15 00:13	1
Trifluorotoluene (Surr)	105		50 - 150					09/30/15 00:13	1

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	0.39		0.13		mg/L		09/30/15 11:07	10/10/15 11:44	1
Motor Oil (>C24-C36)	ND		0.30		mg/L		09/30/15 11:07	10/10/15 11:44	1

TestAmerica Seattle

# Client Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 GWM B0046601.0018.00420

TestAmerica Job ID: 580-53491-1

SDG: CVX Site 354972

**Client Sample ID: U-2-RI-PHILLIPS**

Date Collected: 09/21/15 09:30

Date Received: 09/21/15 15:00

**Lab Sample ID: 580-53491-3**

Matrix: Water

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>o-Terphenyl</i>	93		50 - 150	09/30/15 11:07	10/10/15 11:44	1

**Method: 1631E - Mercury, Low Level (CVAFS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	1.5		0.50		ng/L	D	09/28/15 10:30	09/30/15 16:22	1

**Method: 6020 - Metals (ICP/MS)**

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	0.024		0.0050		mg/L	D	09/28/15 13:59	09/29/15 02:11	5
Barium	0.051		0.0060		mg/L	D	09/28/15 13:59	09/29/15 02:11	5
Cadmium	ND		0.0020		mg/L	D	09/28/15 13:59	09/29/15 02:11	5
Chromium	ND		0.0020		mg/L	D	09/28/15 13:59	09/29/15 02:11	5
Copper	ND		0.010		mg/L	D	09/28/15 13:59	09/29/15 02:11	5
Lead	ND		0.0020		mg/L	D	09/28/15 13:59	09/29/15 02:11	5
Manganese	3.0		0.010		mg/L	D	09/28/15 13:59	09/29/15 02:11	5
Selenium	ND		0.0050		mg/L	D	09/28/15 13:59	09/29/15 02:11	5
Silver	ND		0.0020		mg/L	D	09/28/15 13:59	09/29/15 02:11	5
Zinc	ND		0.035		mg/L	D	09/28/15 13:59	09/29/15 02:11	5

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 GWM B0046601.0018.00420

TestAmerica Job ID: 580-53491-1

SDG: CVX Site 354972

## Method: 8260B - Volatile Organic Compounds (GC/MS)

**Lab Sample ID: MB 580-202326/4**

**Matrix: Water**

**Analysis Batch: 202326**

**Client Sample ID: Method Blank**  
**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			10/02/15 12:44	1
Ethylbenzene	ND		3.0		ug/L			10/02/15 12:44	1
Methyl tert-butyl ether	ND		1.0		ug/L			10/02/15 12:44	1
m-Xylene & p-Xylene	ND		3.0		ug/L			10/02/15 12:44	1
o-Xylene	ND		2.0		ug/L			10/02/15 12:44	1
Toluene	ND		2.0		ug/L			10/02/15 12:44	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	106		75 - 120		10/02/15 12:44	1
Dibromofluoromethane (Surr)	104		85 - 115		10/02/15 12:44	1
1,2-Dichloroethane-d4 (Surr)	106		70 - 120		10/02/15 12:44	1
Toluene-d8 (Surr)	98		85 - 120		10/02/15 12:44	1
Trifluorotoluene (Surr)	104		70 - 136		10/02/15 12:44	1

**Lab Sample ID: LCS 580-202326/5**

**Matrix: Water**

**Analysis Batch: 202326**

**Client Sample ID: Lab Control Sample**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.
Benzene	20.1	18.0		ug/L		90	80 - 120
Ethylbenzene	20.1	18.7		ug/L		93	75 - 125
Methyl tert-butyl ether	20.0	18.8		ug/L		94	65 - 125
m-Xylene & p-Xylene	20.0	18.8		ug/L		94	75 - 130
o-Xylene	20.0	18.7		ug/L		94	80 - 120
Toluene	20.0	18.0		ug/L		90	75 - 120

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	108		75 - 120
Dibromofluoromethane (Surr)	103		85 - 115
1,2-Dichloroethane-d4 (Surr)	101		70 - 120
Toluene-d8 (Surr)	97		85 - 120
Trifluorotoluene (Surr)	105		70 - 136

**Lab Sample ID: LCSD 580-202326/6**

**Matrix: Water**

**Analysis Batch: 202326**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.	RPD	RPD Limit
Benzene	20.1	17.0		ug/L		85	80 - 120	6	30
Ethylbenzene	20.1	17.3		ug/L		86	75 - 125	8	30
Methyl tert-butyl ether	20.0	19.7		ug/L		98	65 - 125	5	30
m-Xylene & p-Xylene	20.0	17.5		ug/L		87	75 - 130	7	30
o-Xylene	20.0	17.2		ug/L		86	80 - 120	8	30
Toluene	20.0	16.5		ug/L		82	75 - 120	9	30

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
4-Bromofluorobenzene (Surr)	104		75 - 120

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 GWM B0046601.0018.00420

TestAmerica Job ID: 580-53491-1

SDG: CVX Site 354972

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 580-202326/6**

**Matrix: Water**

**Analysis Batch: 202326**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Dibromofluoromethane (Surr)	105		85 - 115
1,2-Dichloroethane-d4 (Surr)	103		70 - 120
Toluene-d8 (Surr)	95		85 - 120
Trifluorotoluene (Surr)	104		70 - 136

**Lab Sample ID: MB 580-203800/4**

**Matrix: Water**

**Analysis Batch: 203800**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzene	ND		2.0		ug/L			10/20/15 11:37	1
Ethylbenzene	ND		3.0		ug/L			10/20/15 11:37	1
Methyl tert-butyl ether	ND		1.0		ug/L			10/20/15 11:37	1
m-Xylene & p-Xylene	ND		3.0		ug/L			10/20/15 11:37	1
o-Xylene	ND		2.0		ug/L			10/20/15 11:37	1
Toluene	ND		2.0		ug/L			10/20/15 11:37	1
Surrogate	MB %Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
4-Bromofluorobenzene (Surr)	99		75 - 120					10/20/15 11:37	1
Dibromofluoromethane (Surr)	94		85 - 115					10/20/15 11:37	1
1,2-Dichloroethane-d4 (Surr)	101		70 - 120					10/20/15 11:37	1
Toluene-d8 (Surr)	100		85 - 120					10/20/15 11:37	1
Trifluorotoluene (Surr)	90		70 - 136					10/20/15 11:37	1

**Lab Sample ID: LCS 580-203800/5**

**Matrix: Water**

**Analysis Batch: 203800**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec.	Limits
Benzene	20.1	21.0		ug/L		105	80 - 120
Ethylbenzene	20.1	21.2		ug/L		105	75 - 125
Methyl tert-butyl ether	20.0	21.2		ug/L		106	65 - 125
m-Xylene & p-Xylene	20.0	22.1		ug/L		110	75 - 130
o-Xylene	20.0	21.5		ug/L		107	80 - 120
Toluene	20.0	21.4		ug/L		107	75 - 120
Surrogate	LCS %Recovery	LCS Qualifier	Limits				
4-Bromofluorobenzene (Surr)	95		75 - 120				
Dibromofluoromethane (Surr)	98		85 - 115				
1,2-Dichloroethane-d4 (Surr)	106		70 - 120				
Toluene-d8 (Surr)	99		85 - 120				
Trifluorotoluene (Surr)	90		70 - 136				

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 GWM B0046601.0018.00420

TestAmerica Job ID: 580-53491-1

SDG: CVX Site 354972

## Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

**Lab Sample ID: LCSD 580-203800/6**

**Matrix: Water**

**Analysis Batch: 203800**

**Client Sample ID: Lab Control Sample Dup**  
**Prep Type: Total/NA**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec.	Limits	RPD	RPD Limit
Benzene	20.1	21.1		ug/L		105	80 - 120	0	30
Ethylbenzene	20.1	21.3		ug/L		106	75 - 125	1	30
Methyl tert-butyl ether	20.0	19.8		ug/L		99	65 - 125	7	30
m-Xylene & p-Xylene	20.0	22.2		ug/L		111	75 - 130	0	30
o-Xylene	20.0	21.5		ug/L		107	80 - 120	0	30
Toluene	20.0	21.7		ug/L		108	75 - 120	1	30
<hr/>									
Surrogate	LCSD %Recovery	LCSD Qualifier	Limits						
4-Bromofluorobenzene (Surr)	94		75 - 120						
Dibromofluoromethane (Surr)	97		85 - 115						
1,2-Dichloroethane-d4 (Surr)	102		70 - 120						
Toluene-d8 (Surr)	100		85 - 120						
Trifluorotoluene (Surr)	88		70 - 136						

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM)

**Lab Sample ID: MB 580-201840/1-A**

**Matrix: Water**

**Analysis Batch: 202697**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 201840**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.010		ug/L		09/26/15 14:44	10/07/15 18:37	1
2-Methylnaphthalene	ND		0.013		ug/L		09/26/15 14:44	10/07/15 18:37	1
1-Methylnaphthalene	ND		0.010		ug/L		09/26/15 14:44	10/07/15 18:37	1
Acenaphthylene	ND		0.010		ug/L		09/26/15 14:44	10/07/15 18:37	1
Acenaphthene	ND		0.010		ug/L		09/26/15 14:44	10/07/15 18:37	1
Fluorene	ND		0.010		ug/L		09/26/15 14:44	10/07/15 18:37	1
Phenanthrene	ND		0.10		ug/L		09/26/15 14:44	10/07/15 18:37	1
Anthracene	ND		0.025		ug/L		09/26/15 14:44	10/07/15 18:37	1
Fluoranthene	ND		0.050		ug/L		09/26/15 14:44	10/07/15 18:37	1
Pyrene	ND		0.050		ug/L		09/26/15 14:44	10/07/15 18:37	1
Benzo[a]anthracene	ND		0.010		ug/L		09/26/15 14:44	10/07/15 18:37	1
Chrysene	ND		0.010		ug/L		09/26/15 14:44	10/07/15 18:37	1
Benzo[a]pyrene	ND		0.010		ug/L		09/26/15 14:44	10/07/15 18:37	1
Indeno[1,2,3-cd]pyrene	ND		0.010		ug/L		09/26/15 14:44	10/07/15 18:37	1
Dibenz(a,h)anthracene	ND		0.010		ug/L		09/26/15 14:44	10/07/15 18:37	1
Benzo[g,h,i]perylene	ND		0.010		ug/L		09/26/15 14:44	10/07/15 18:37	1
Benzo[b]fluoranthene	ND		0.010		ug/L		09/26/15 14:44	10/07/15 18:37	1
Benzo[k]fluoranthene	ND		0.010		ug/L		09/26/15 14:44	10/07/15 18:37	1
<hr/>									
Surrogate	MB %Recovery	MB Qualifier	Limits						
Terphenyl-d14	90		64 - 150						
				Prepared	Analyzed	Dil Fac			
				09/26/15 14:44	10/07/15 18:37	1			

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 GWM B0046601.0018.00420

TestAmerica Job ID: 580-53491-1

SDG: CVX Site 354972

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

**Lab Sample ID: LCS 580-201840/2-A**

**Matrix: Water**

**Analysis Batch: 202697**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 201840**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.	Limits
Naphthalene	1.00	0.655		ug/L	66	54 - 106		
2-Methylnaphthalene	1.00	0.748		ug/L	75	54 - 114		
1-Methylnaphthalene	1.00	0.732		ug/L	73	57 - 115		
Acenaphthylene	1.00	0.651		ug/L	65	30 - 127		
Acenaphthene	1.00	0.658		ug/L	66	54 - 109		
Fluorene	1.00	0.769		ug/L	77	50 - 130		
Phenanthrene	1.00	0.728		ug/L	73	53 - 115		
Anthracene	1.00	0.437		ug/L	44	30 - 130		
Fluoranthene	1.00	0.722		ug/L	72	58 - 128		
Pyrene	1.00	0.685		ug/L	68	53 - 121		
Benzo[a]anthracene	1.00	0.607		ug/L	61	35 - 125		
Chrysene	1.00	0.710		ug/L	71	57 - 120		
Benzo[a]pyrene	1.00	0.441		ug/L	44	30 - 127		
Indeno[1,2,3-cd]pyrene	1.00	0.757		ug/L	76	53 - 131		
Dibenz(a,h)anthracene	1.00	0.762		ug/L	76	60 - 136		
Benzo[g,h,i]perylene	1.00	0.650		ug/L	65	51 - 128		
Benzo[b]fluoranthene	1.00	0.870		ug/L	87	59 - 126		
Benzo[k]fluoranthene	1.00	0.784		ug/L	78	49 - 136		
<b>Surrogate</b>		<b>LCS</b>	<b>LCS</b>					
<b>Surrogate</b>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>				
Terphenyl-d14		85		64 - 150				

**Lab Sample ID: LCSD 580-201840/3-A**

**Matrix: Water**

**Analysis Batch: 202697**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 201840**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.	RPD	RPD	Limit
Naphthalene	1.00	0.615		ug/L	61	54 - 106		6	20	
2-Methylnaphthalene	1.00	0.693		ug/L	69	54 - 114		8	20	
1-Methylnaphthalene	1.00	0.676		ug/L	68	57 - 115		8	20	
Acenaphthylene	1.00	0.598		ug/L	60	30 - 127		9	20	
Acenaphthene	1.00	0.613		ug/L	61	54 - 109		7	20	
Fluorene	1.00	0.682		ug/L	68	50 - 130		12	20	
Phenanthrene	1.00	0.694		ug/L	69	53 - 115		5	20	
Anthracene	1.00	0.357		ug/L	36	30 - 130		20	20	
Fluoranthene	1.00	0.696		ug/L	70	58 - 128		4	20	
Pyrene	1.00	0.661		ug/L	66	53 - 121		3	20	
Benzo[a]anthracene	1.00	0.547		ug/L	55	35 - 125		10	20	
Chrysene	1.00	0.662		ug/L	66	57 - 120		7	20	
Benzo[a]pyrene	1.00	0.406		ug/L	41	30 - 127		8	20	
Indeno[1,2,3-cd]pyrene	1.00	0.839		ug/L	84	53 - 131		10	20	
Dibenz(a,h)anthracene	1.00	0.849		ug/L	85	60 - 136		11	20	
Benzo[g,h,i]perylene	1.00	0.727		ug/L	73	51 - 128		11	20	
Benzo[b]fluoranthene	1.00	0.963		ug/L	96	59 - 126		10	20	
Benzo[k]fluoranthene	1.00	0.862		ug/L	86	49 - 136		9	20	

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 GWM B0046601.0018.00420

TestAmerica Job ID: 580-53491-1

SDG: CVX Site 354972

## Method: 8270C SIM - Semivolatile Organic Compounds (GC/MS SIM) (Continued)

Lab Sample ID: LCSD 580-201840/3-A

Matrix: Water

Analysis Batch: 202697

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Prep Batch: 201840

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
Terphenyl-d14	82		64 - 150

## Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Lab Sample ID: MB 580-202028/5

Matrix: Water

Analysis Batch: 202028

Client Sample ID: Method Blank

Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Gasoline	ND		0.050		mg/L			09/29/15 15:22	1
<hr/>									
<hr/>									
<hr/>									
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac			
4-Bromofluorobenzene (Surr)	92		50 - 150		09/29/15 15:22	1			
Trifluorotoluene (Surr)	109		50 - 150		09/29/15 15:22	1			

Lab Sample ID: LCS 580-202028/6

Matrix: Water

Analysis Batch: 202028

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec.
Gasoline	1.16	0.995		mg/L		86	79 - 110
<hr/>							
<hr/>							
<hr/>							
Surrogate	%Recovery	Qualifier	Limits				
4-Bromofluorobenzene (Surr)	98		50 - 150				
Trifluorotoluene (Surr)	114		50 - 150				

Lab Sample ID: LCSD 580-202028/7

Matrix: Water

Analysis Batch: 202028

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec.	RPD	RPD
Gasoline	1.16	1.08		mg/L		93	79 - 110	8	20
<hr/>									
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<hr/>									
Surrogate	%Recovery	Qualifier	Limits						
4-Bromofluorobenzene (Surr)	99		50 - 150						
Trifluorotoluene (Surr)	115		50 - 150						

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 580-202110/1-A

Matrix: Water

Analysis Batch: 202971

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 202110

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
#2 Diesel (C10-C24)	ND		0.11		mg/L		09/30/15 11:07	10/10/15 09:49	1
Motor Oil (>C24-C36)	ND		0.25		mg/L		09/30/15 11:07	10/10/15 09:49	1

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc  
Project/Site: 3Q2015 GWM B0046601.0018.00420

TestAmerica Job ID: 580-53491-1  
SDG: CVX Site 354972

## Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

**Lab Sample ID:** MB 580-202110/1-A  
**Matrix:** Water  
**Analysis Batch:** 202971

**Client Sample ID:** Method Blank  
**Prep Type:** Total/NA  
**Prep Batch:** 202110

Surrogate	MB	MB	%Recovery	Qualifier	Limits
	64	50 - 150			
<i>o-Terphenyl</i>					

**Prepared:** 09/30/15 11:07    **Analyzed:** 10/10/15 09:49    **Dil Fac:** 1

**Lab Sample ID:** LCS 580-202110/2-A  
**Matrix:** Water  
**Analysis Batch:** 202971

**Client Sample ID:** Lab Control Sample  
**Prep Type:** Total/NA  
**Prep Batch:** 202110

Analyte	Spike	LCS	LCS	Unit	D	%Rec.	Limits
	Added	Result	Qualifier				
#2 Diesel (C10-C24)	0.500	0.451		mg/L		90	59 - 120
Motor Oil (>C24-C36)	0.502	0.504		mg/L		100	71 - 140
<i>Surrogate</i>		<b>LCS</b>	<b>LCS</b>				
<i>o-Terphenyl</i>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>			
		88		50 - 150			

**Lab Sample ID:** LCSD 580-202110/3-A  
**Matrix:** Water  
**Analysis Batch:** 202971

**Client Sample ID:** Lab Control Sample Dup  
**Prep Type:** Total/NA  
**Prep Batch:** 202110

Analyte	Spike	LCSD	LCSD	Unit	D	%Rec.	Limits	RPD	Limit
	Added	Result	Qualifier						
#2 Diesel (C10-C24)	0.500	0.509		mg/L		102	59 - 120	12	27
Motor Oil (>C24-C36)	0.502	0.573		mg/L		114	71 - 140	13	27
<i>Surrogate</i>		<b>LCSD</b>	<b>LCSD</b>						
<i>o-Terphenyl</i>		<b>%Recovery</b>	<b>Qualifier</b>	<b>Limits</b>					
		100		50 - 150					

## Method: 1631E - Mercury, Low Level (CVAFS)

**Lab Sample ID:** MB 240-199346/1-A  
**Matrix:** Water  
**Analysis Batch:** 199801

**Client Sample ID:** Method Blank  
**Prep Type:** Total/NA  
**Prep Batch:** 199346

Analyte	MB	MB	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier									
Mercury	ND				0.50		ng/L		09/28/15 10:30	09/30/15 13:35	1

**Lab Sample ID:** LCS 240-199346/2-A  
**Matrix:** Water  
**Analysis Batch:** 199801

**Client Sample ID:** Lab Control Sample  
**Prep Type:** Total/NA  
**Prep Batch:** 199346

Analyte	Spike	LCS	LCS	Unit	D	%Rec.	Limits
	Added	Result	Qualifier				
Mercury	5.00	3.87		ng/L		77	77 - 123

**Lab Sample ID:** 580-53488-L-2-C MS  
**Matrix:** Water  
**Analysis Batch:** 199606

**Client Sample ID:** Matrix Spike  
**Prep Type:** Total/NA  
**Prep Batch:** 199346

Analyte	Sample	Sample	Spike	Result	MS	MS	Unit	D	%Rec.	Limits
	Result	Qualifier								
Mercury	ND		5.00	4.27			ng/L		77	71 - 125

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 GWM B0046601.0018.00420

TestAmerica Job ID: 580-53491-1

SDG: CVX Site 354972

## Method: 1631E - Mercury, Low Level (CVAFS) (Continued)

**Lab Sample ID: 580-53488-L-2-D MSD**

**Matrix: Water**

**Analysis Batch: 199606**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total/NA**

**Prep Batch: 199346**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	RPD	RPD Limit
Mercury	ND		5.00	4.10		ng/L	73	71 - 125	4	24

## Method: 6020 - Metals (ICP/MS)

**Lab Sample ID: MB 580-201922/19-A**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Method Blank**

**Prep Type: Total/NA**

**Prep Batch: 201922**

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Arsenic	ND		0.0050	mg/L		09/28/15 13:59	09/29/15 00:53		5
Barium	ND		0.0060	mg/L		09/28/15 13:59	09/29/15 00:53		5
Cadmium	ND		0.0020	mg/L		09/28/15 13:59	09/29/15 00:53		5
Chromium	ND		0.0020	mg/L		09/28/15 13:59	09/29/15 00:53		5
Copper	ND		0.010	mg/L		09/28/15 13:59	09/29/15 00:53		5
Lead	ND		0.0020	mg/L		09/28/15 13:59	09/29/15 00:53		5
Manganese	ND		0.010	mg/L		09/28/15 13:59	09/29/15 00:53		5
Selenium	ND		0.0050	mg/L		09/28/15 13:59	09/29/15 00:53		5
Silver	ND		0.0020	mg/L		09/28/15 13:59	09/29/15 00:53		5
Zinc	ND		0.035	mg/L		09/28/15 13:59	09/29/15 00:53		5

**Lab Sample ID: LCS 580-201922/20-A**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Lab Control Sample**

**Prep Type: Total/NA**

**Prep Batch: 201922**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Arsenic	4.00	4.09		mg/L	102	80 - 120	
Barium	4.00	4.21		mg/L	105	80 - 120	
Cadmium	0.100	0.105		mg/L	105	80 - 120	
Chromium	0.400	0.390		mg/L	98	80 - 120	
Copper	0.500	0.504		mg/L	101	80 - 120	
Lead	1.00	0.938		mg/L	94	80 - 120	
Manganese	1.00	1.01		mg/L	101	80 - 120	
Selenium	4.00	4.24		mg/L	106	80 - 120	
Silver	0.600	0.581		mg/L	97	80 - 120	
Zinc	4.00	3.96		mg/L	99	80 - 120	

**Lab Sample ID: LCSD 580-201922/21-A**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 201922**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
Arsenic	4.00	4.03		mg/L	101	80 - 120		1	20
Barium	4.00	4.14		mg/L	104	80 - 120		2	20
Cadmium	0.100	0.103		mg/L	103	80 - 120		2	20
Chromium	0.400	0.397		mg/L	99	80 - 120		2	20
Copper	0.500	0.502		mg/L	100	80 - 120		1	20
Lead	1.00	0.926		mg/L	93	80 - 120		1	20
Manganese	1.00	1.00		mg/L	100	80 - 120		0	20

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 GWM B0046601.0018.00420

TestAmerica Job ID: 580-53491-1

SDG: CVX Site 354972

## Method: 6020 - Metals (ICP/MS) (Continued)

**Lab Sample ID: LCSD 580-201922/21-A**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Lab Control Sample Dup**

**Prep Type: Total/NA**

**Prep Batch: 201922**

**%Rec.**

**RPD**

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Selenium	4.00	4.11		mg/L		103	80 - 120	3	20
Silver	0.600	0.579		mg/L		96	80 - 120	0	20
Zinc	4.00	4.02		mg/L		101	80 - 120	1	20

**Lab Sample ID: 580-53396-D-2-C MS**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Matrix Spike**

**Prep Type: Total/NA**

**Prep Batch: 201922**

**%Rec.**

**Limits**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Arsenic	0.0093		4.00	4.36		mg/L		109	80 - 120
Barium	0.056		4.00	4.47		mg/L		110	80 - 120
Cadmium	ND		0.100	0.111		mg/L		111	80 - 120
Chromium	ND		0.400	0.434		mg/L		108	80 - 120
Copper	ND		0.500	0.540		mg/L		108	80 - 120
Lead	ND		1.00	1.01		mg/L		101	80 - 120
Manganese	3.6		1.00	4.73		mg/L		111	80 - 120
Selenium	ND		4.00	4.54		mg/L		114	80 - 120
Silver	ND		0.600	0.612		mg/L		102	80 - 120
Zinc	ND		4.00	4.31		mg/L		107	80 - 120

**Lab Sample ID: 580-53396-D-2-D MSD**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Matrix Spike Duplicate**

**Prep Type: Total/NA**

**Prep Batch: 201922**

**%Rec.**

**RPD**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Arsenic	0.0093		4.00	4.28		mg/L		107	80 - 120	2	20
Barium	0.056		4.00	4.40		mg/L		109	80 - 120	2	20
Cadmium	ND		0.100	0.108		mg/L		108	80 - 120	3	20
Chromium	ND		0.400	0.426		mg/L		106	80 - 120	2	20
Copper	ND		0.500	0.529		mg/L		106	80 - 120	2	20
Lead	ND		1.00	0.996		mg/L		100	80 - 120	1	20
Manganese	3.6		1.00	4.71		mg/L		110	80 - 120	0	20
Selenium	ND		4.00	4.45		mg/L		111	80 - 120	2	20
Silver	ND		0.600	0.605		mg/L		101	80 - 120	1	20
Zinc	ND		4.00	4.23		mg/L		105	80 - 120	2	20

**Lab Sample ID: 580-53396-D-2-B DU**

**Matrix: Water**

**Analysis Batch: 201970**

**Client Sample ID: Duplicate**

**Prep Type: Total/NA**

**Prep Batch: 201922**

**RPD**

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	Limit
Arsenic	0.0093			0.00931		mg/L				0.2	20
Barium	0.056			0.0568		mg/L				1	20
Cadmium	ND			ND		mg/L				NC	20
Chromium	ND			ND		mg/L				NC	20
Copper	ND			ND		mg/L				NC	20
Lead	ND			ND		mg/L				NC	20
Manganese	3.6			3.65		mg/L				1	20
Selenium	ND			ND		mg/L				NC	20

TestAmerica Seattle

# QC Sample Results

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 GWM B0046601.0018.00420

TestAmerica Job ID: 580-53491-1

SDG: CVX Site 354972

## Method: 6020 - Metals (ICP/MS) (Continued)

Lab Sample ID: 580-53396-D-2-B DU

Matrix: Water

Analysis Batch: 201970

Client Sample ID: Duplicate

Prep Type: Total/NA

Prep Batch: 201922

RPD

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Silver	ND		ND		mg/L		NC	20
Zinc	ND		ND		mg/L		NC	20

# Lab Chronicle

Client: ARCADIS U.S. Inc  
 Project/Site: 3Q2015 GWM B0046601.0018.00420

TestAmerica Job ID: 580-53491-1  
 SDG: CVX Site 354972

**Client Sample ID: TRIP BLANK**

**Date Collected: 09/21/15 00:00**

**Date Received: 09/21/15 15:00**

**Lab Sample ID: 580-53491-1**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	NWTPH-Gx		1	202028	09/29/15 17:02	CJ	TAL SEA

**Client Sample ID: B-4-RI-PHILLIPS**

**Date Collected: 09/21/15 10:30**

**Date Received: 09/21/15 15:00**

**Lab Sample ID: 580-53491-2**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	202326	10/02/15 17:55	TL1	TAL SEA
Total/NA	Prep	3520C			201840	09/26/15 14:45	JDR	TAL SEA
Total/NA	Analysis	8270C SIM		100	202697	10/07/15 22:51	ERZ	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	202028	09/29/15 23:40	CJ	TAL SEA
Total/NA	Prep	3510C			202110	09/30/15 11:07	DCC	TAL SEA
Total/NA	Analysis	NWTPH-Dx		10	202971	10/10/15 11:25	NMI	TAL SEA
Total/NA	Prep	1631E			199346	09/28/15 10:30	DNS	TAL CAN
Total/NA	Analysis	1631E		1	199801	09/30/15 16:30	DNS	TAL CAN
Total/NA	Prep	3010A			201922	09/28/15 13:59	PAB	TAL SEA
Total/NA	Analysis	6020		5	201970	09/29/15 02:06	FCW	TAL SEA

**Client Sample ID: U-2-RI-PHILLIPS**

**Date Collected: 09/21/15 09:30**

**Date Received: 09/21/15 15:00**

**Lab Sample ID: 580-53491-3**

**Matrix: Water**

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B		1	203800	10/20/15 14:23	K1K	TAL SEA
Total/NA	Prep	3520C			201840	09/26/15 14:45	JDR	TAL SEA
Total/NA	Analysis	8270C SIM		10	202697	10/07/15 23:37	ERZ	TAL SEA
Total/NA	Analysis	NWTPH-Gx		1	202028	09/30/15 00:13	CJ	TAL SEA
Total/NA	Prep	3510C			202110	09/30/15 11:07	DCC	TAL SEA
Total/NA	Analysis	NWTPH-Dx		1	202971	10/10/15 11:44	NMI	TAL SEA
Total/NA	Prep	1631E			199346	09/28/15 10:30	DNS	TAL CAN
Total/NA	Analysis	1631E		1	199801	09/30/15 16:22	DNS	TAL CAN
Total/NA	Prep	3010A			201922	09/28/15 13:59	PAB	TAL SEA
Total/NA	Analysis	6020		5	201970	09/29/15 02:11	FCW	TAL SEA

## Laboratory References:

TAL CAN = TestAmerica Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL SEA = TestAmerica Seattle, 5755 8th Street East, Tacoma, WA 98424, TEL (253)922-2310

TestAmerica Seattle

# Certification Summary

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 GWM B0046601.0018.00420

TestAmerica Job ID: 580-53491-1

SDG: CVX Site 354972

## Laboratory: TestAmerica Seattle

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
Alaska (UST)	State Program	10	UST-022	03-02-16
California	State Program	9	2901	01-31-17
L-A-B	DoD ELAP		L2236	01-19-16
L-A-B	ISO/IEC 17025		L2236	01-19-16
Montana (UST)	State Program	8	N/A	04-30-20
Oregon	NELAP	10	WA100007	11-06-16
US Fish & Wildlife	Federal		LE058448-0	02-28-16
USDA	Federal		P330-14-00126	04-08-17
Washington	State Program	10	C553	02-17-16

## Laboratory: TestAmerica Canton

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	NELAP	9	01144CA	06-30-14 *
California	State Program	9	2927	04-30-17
Connecticut	State Program	1	PH-0590	12-31-15
Illinois	NELAP	5	200004	07-31-16
Kansas	NELAP	7	E-10336	01-31-16 *
Kentucky (UST)	State Program	4	58	02-26-16
Kentucky (WW)	State Program	4	98016	12-31-15
L-A-B	DoD ELAP		L2315	07-18-16
Minnesota	NELAP	5	039-999-348	12-31-15
Nevada	State Program	9	OH-000482008A	07-31-16
New Jersey	NELAP	2	OH001	10-30-15 *
New York	NELAP	2	10975	03-31-16
Ohio VAP	State Program	5	CL0024	10-31-15 *
Oregon	NELAP	10	4062	02-23-16
Pennsylvania	NELAP	3	68-00340	08-31-16
Texas	NELAP	6	T104704517-15-5	08-31-16
USDA	Federal		P330-13-00319	11-26-16
Virginia	NELAP	3	460175	09-14-16
Washington	State Program	10	C971	01-12-16
West Virginia DEP	State Program	3	210	12-31-15
Wisconsin	State Program	5	999518190	08-31-16

\* Certification renewal pending - certification considered valid.

## Sample Summary

Client: ARCADIS U.S. Inc

Project/Site: 3Q2015 GWM B0046601.0018.00420

TestAmerica Job ID: 580-53491-1

SDG: CVX Site 354972

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
580-53491-1	TRIP BLANK	Water	09/21/15 00:00	09/21/15 15:00
580-53491-2	B-4-RI-PHILLIPS	Water	09/21/15 10:30	09/21/15 15:00
580-53491-3	U-2-RI-PHILLIPS	Water	09/21/15 09:30	09/21/15 15:00

1

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TestAmerica Seattle



***Chain of  
Custody Record***

Client <b>ARCADIS</b>			Client Contact <b>Lynne Fenley</b>			Date <b>9/21/15</b>			Chain of Custody Number <b>30576</b>														
Address <b>111 SW Columbia St, suite 670</b>			Telephone Number (Area Code)/Fax Number <b>503-220-8201 x1114</b>			Lab Number																	
City <b>Portland</b>	State <b>OR</b>	Zip Code <b>97201</b>	Sampler <b>MA/HAO</b>	Lab Contact <b>Sarah Murphy</b>	Analysis (Attach list if more space is needed)																		
Project Name and Location (State) <b>3Q15 willbridge Blum 354972</b>			Billing Contact																				
Contract/Purchase Order/Quote No. <b>80046601.0018.00420</b>			Matrix			Containers & Preservatives																	
Sample I.D. and Location/Description (Containers for each sample may be combined on one line)			Date	Time	Air	Aqueous	Sed.	Soil	Unspes.	H2SO4	HNO3	HCl	NaOH	ZnCl/ NaOH	BTEX, MTBE	NWTPH, Gx	NWTPH, Dx	Pd (Jewelry)	Total metals	Asbestos	Mercury (low)		
Trip blank			—	—	✓										✓	✓	✓	✓	✓	✓			
B-4-RI-Phillips			9/21/15	1030	✓				4		1	7			✓	✓	✓	✓	✓	✓	✓		
U-2-RI-Phillips			9/21/15	0930	✓				4		1	7			✓	✓	✓	✓	✓	✓	✓		
Special Instructions/ Conditions of Receipt																							

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Cooler <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Temp: <u>ice</u>	Possible Hazard Identification <input checked="" type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Return To Client <input type="checkbox"/> Archive For _____ Months	Sample Disposal <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Return To Client <input type="checkbox"/> Archive For _____ Months	(A fee may be assessed if samples are retained longer than 1 month)
Turn Around Time Required (business days) <input type="checkbox"/> 24 Hours <input type="checkbox"/> 48 Hours <input type="checkbox"/> 5 Days <input type="checkbox"/> 10 Days <input type="checkbox"/> 15 Days <input checked="" type="checkbox"/> Other <u>2 weeks</u>					
QC Requirements (Specify)					
IR1 0.1/0.5 A2 1.3/1.4					
1. Relinquished By <u>Holly Olson</u>	Sign/Print	Date <u>9/21/15</u>	Time <u>2 PM</u>	1. Received By <u>Jessica Morgan</u>	Date <u>9/21/15</u>
2. Relinquished By <u>Jessica Morgan</u>	Sign/Print	Date <u>9/21/15</u>	Time <u>1500</u>	2. Received By <u>Jessica Morgan</u>	Date <u>9/21/15</u>
3. Relinquished By <u>Holly M. Knab - Deva</u>	Sign/Print	Date <u>9/21/15</u>	Time <u>1700</u>	3. Received By <u>Tom Black</u>	Date <u>9/22/15</u>
Comments: * including RCL 8, Zn, Cu * including 2mering Inophthaline send report to Brian.Marcum@areadis.com and Brian.Flemister@areadis.com					
DISTRIBUTION: WHITE - Stays with the Samples; CANARY - Returned to Client with Report; PINK - Field Copy					

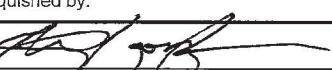
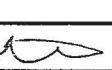
19.41 C(17.9)

## **Chain of Custody Record**



**TestAmerica**

THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)		Sampler:		Lab PM: Murphy, Sarah A		Carrier Tracking No(s):		COC No: 580-30425.1
Client Contact: Shipping/Receiving		Phone:		E-Mail: sarah.murphy@testamericainc.com				Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.								Job #: 580-53491-1
Address: 4101 Shuffel Street NW, City: North Canton State, Zip: OH, 44720 Phone: 330-497-9396(Tel) 330-497-0772(Fax) Email:		Due Date Requested: 10/1/2015				Analysis Requested		Preservation Codes:
		TAT Requested (days):						A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA
		PO #:						M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2SO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - ph 4-5 Z - other (specify)
Project Name: 3Q2015 GWM B0046601.0018.00420		Project #: 58008238						Other:
Site:		SSOW#:						
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=tissue, A=Air)	Field Filtered/Sample Yes or No	1611E/1631E_Prep	Total Number of containers:
B-4-RI-PHILLIPS (580-53491-2)		9/21/15	10:30 Pacific		Water	<input checked="" type="checkbox"/>	X	2
U-2-RI-PHILLIPS (580-53491-3)		9/21/15	09:30 Pacific		Water	<input checked="" type="checkbox"/>	X	2
Possible Hazard Identification		Sample Disposal ( A fee may be assessed if samples are retained longer than 1 month)						
Unconfirmed		<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For Months						
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:						
Empty Kit Relinquished by:		Date:	Time:	Method of Shipment:				
Relinquished by:		Date/Time: 9/22/15 1500	Company: TAP	Received by: 	Date/Time: 9-23-15 9:00	Company: i4		
Relinquished by:		Date/Time:	Company:	Received by:	Date/Time:	Company:		
Relinquished by:		Date/Time:	Company:	Received by:	Date/Time:	Company:		
Custody Seals Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:						

TestAmerica Canton Sample Receipt Form/Narrative  
Canton Facility

Login # :

Client <u>Seattle</u>	Site Name _____	Cooler unpacked by: 	
Cooler Received on <u>9-23-15</u>	Opened on <u>9-24-15</u>		
FedEx: 1 <sup>st</sup> Grd <input checked="" type="checkbox"/> UPS FAS Stetson	Client Drop Off	TestAmerica Courier	
Receipt After-hours: Drop-off Date/Time		Storage Location	
TestAmerica Cooler # _____	Foam Box	Client Cooler <input checked="" type="checkbox"/> Other _____	
Packing material used: <u>Bubble Wrap</u>	<u>Foam</u>	<u>Plastic Bag</u>	
COOLANT: <u>Wet Ice</u>	<u>Blue Ice</u>	<u>Dry Ice</u>	<u>Water</u> <input checked="" type="checkbox"/>

1. Cooler temperature upon receipt  
 IR GUN# A (CF +1.0 °C) Observed Cooler Temp.    °C Corrected Cooler Temp.    °C  
 IR GUN# 4 (CF +0.5 °C) Observed Cooler Temp.    °C Corrected Cooler Temp.    °C  
 IR GUN# 5 (CF +0.4 °C) Observed Cooler Temp.    °C Corrected Cooler Temp.    °C  
 IR GUN# 8 (CF -1.5 °C) Observed Cooler Temp. 19.4 °C Corrected Cooler Temp. 17.9 °C
2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No  
 -Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA  
 -Were custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels be reconciled with the COC? Yes No
9. Were correct bottle(s) used for the test(s) indicated? Yes No
10. Sufficient quantity received to perform indicated analyses? Yes No
11. Were sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC554612
12. Were VOAs on the COC? Yes
13. Were air bubbles >6 mm in any VOA vials? Yes No NA
14. Was a trip blank present in the cooler(s)? Trip Blank Lot# \_\_\_\_\_ Yes

Contacted PM \_\_\_\_\_ Date \_\_\_\_\_ by \_\_\_\_\_ via Verbal Voice Mail Other  
Concerning \_\_\_\_\_

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

15. SAMPLE CONDITION

Sample(s) \_\_\_\_\_ were received after the recommended holding time had expired.

Sample(s) \_\_\_\_\_ were received in a broken container.

Sample(s) \_\_\_\_\_ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) \_\_\_\_\_ were further preserved in the laboratory.

Time preserved: \_\_\_\_\_ Preservative(s) added/Lot number(s): \_\_\_\_\_

## Login Sample Receipt Checklist

Client: ARCADIS U.S. Inc

Job Number: 580-53491-1  
SDG Number: CVX Site 354972

**Login Number:** 53491

**List Source:** TestAmerica Seattle

**List Number:** 1

**Creator:** Gonzales, Steve

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	N/A	
Samples do not require splitting or compositing.	N/A	
Residual Chlorine Checked.	N/A	